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I. Introduction

1. The role of the Ad Hoc Inter-sessional Working Group on Financial Resources and Mechanisms and on Economic Growth, Trade and Investment of the Commission on Sustainable Development was to serve as a preparatory meeting for the eighth session of the Commission and to facilitate the Commission in achieving tangible, action-oriented results on the issues of financial resources, trade and investment, and economic growth. In accordance with the established practice of ad hoc working groups of the Commission, the meeting produced two types of documents on the two groups of issues included under the substantive item on its agenda. The documents were prepared by the Co-Chairmen of the Working Group on the basis of the discussions held during the meeting and comments made and proposals submitted by the participants on the preliminary drafts, but were not formally negotiated. The documents are:

(a) The possible elements for draft decisions/ resolutions which could serve as a starting point for further deliberations and negotiations during the eighth session of the Commission on Sustainable Development. It is expected that delegations and groups will further study these documents in the period between the meeting of the Working Group and the session of the Commission with a view to formulating their positions in preparation for negotiations in the drafting groups during the session of the Commission;

(b) The Co-Chairmen's summaries of the discussions, which attempt to reflect the overall thrust of the discussion in the Working Group and the main positions stated by delegations, and which record, when necessary, alternative views and proposals. These summaries will not be further modified and will be included as reference material on given issues in reporting to the Commission.

II. Financial resources and mechanisms

A. Possible elements for a draft decision of the Commission on Sustainable Development at its eighth session

2. The possible elements for a draft decision of the Commission on Sustainable Development at its eighth session on financial resources and mechanisms are the following:

"Introduction

"1. The principal objectives of activities in the area of financial resources and mechanisms should be pursued in full accordance with Agenda 21[a] and paragraphs 76-87 of the Programme for the Further Implementation of Agenda 21.[b] It is important that countries approach sustainable development through a holistic approach, in view of the interconnectedness of the trade, financial, environmental and social aspects of sustainable development.

"2. The rapid process of economic globalization and trade liberalization provides countries with opportunities, risks and challenges for the mobilization of adequate and more stable resources for sustainable development. This may have contributed to the increased supply of private capital flows, including foreign direct investment (FDI), to developing countries; however, it has been accompanied by a decline in official development assistance (ODA) during the 1990s and the marginalization of some developing countries, in particular least developed countries.

"3. In general, the financing for the implementation of Agenda 21 will be met from domestic resources. However, for many developing countries, in particular least developed countries, official development assistance is a main source of external funding, and substantial new and additional funding for sustainable development and the implementation of Agenda 21 will continue to be required.

"Priorities for future work

"4. The Commission will continue to address financial resources and mechanisms as an overarching issue. The next comprehensive discussion of financial resources and mechanisms for sustainable development will take place at the comprehensive review in 2002, of progress since the United Nations Conference on Environment and Development. The review will benefit from the outcome of the high-level event on financing for development which will take place in 2001. In

support of the preparatory process leading up to the comprehensive review, a further meeting of the Expert Group on Finance for Sustainable Development is planned to be held in 2001 at Budapest.

"5. Priority areas for future work will include the following:

(a) Promotion of international finance for sustainable development;

(b) Mobilization of domestic financial resources for sustainable development;

(c) Exploration of innovative financial mechanisms;

(d) Improvement of institutional frameworks and promotion of public and private partnerships.

"Promotion of international finance for sustainable development

"6. Sustainable development requires developed countries to pursue consistently pro-sustainable development policies in all areas, which affect developing countries. Developed countries should prepare long-term strategies in support of sustainable development in developing countries.

"7. Governments of developed countries are urged to increase the quality and quantity of ODA. Governments of developed countries which have not yet fulfilled the commitments undertaken to reach the agreed United Nations target of 0.7 per cent of gross national product (GNP) for ODA are urged to do so as soon as possible, and where agreed, within that target, to earmark 0.15 to 0.20 per cent of their GNP for the least developed countries. In this regard, new ODA should be provided in the form of grants. Aid to the poorest countries, including the least developed countries and most of sub-Saharan Africa, should be carefully targeted to achieve maximum effectiveness.

"8. Governments in developing countries, in cooperation with donors and international organizations and in partnership with major groups, are encouraged to develop policies to enhance the efficiency and effectiveness of aid, policy dialogue, partnership, governance, sound management of public affairs and the participation of civil society.

"9. Creditor countries and international financial institutions are urged to implement speedily the enhanced heavily indebted poor countries (HIPC) initiative to provide 'deeper, broader and faster' debt relief to the eligible countries in order to allow as many countries as possible to benefit from assistance under the initiative as soon as possible. In this regard, donors are urged to implement their financing pledges for the enhanced HIPC initiative, and without further delay agree on an overall financing plan for the HIPC Trust Fund to provide forgiveness of bilateral aid debts for countries qualifying for the enhanced HIPC initiative.

"10. HIPC countries are urged to develop their national poverty strategies in a participatory way so that debt relief is linked with poverty alleviation and allows debtor countries to utilize budgetary savings for social expenditures in order to have maximum impact on poverty reduction. Eligible countries which have not yet entered the HIPC process are urged to implement the necessary policy measures to enable them to participate as soon as possible. The debt relief programme should form part of a comprehensive framework to facilitate the release of substantial resources for financing for development and to ensure that debtor countries do not fall back into arrears. Efforts should be undertaken to eliminate the structural causes of indebtedness. Both bilateral and multilateral creditors should continue to consider ways and means of identifying portions of debt assessed as unpayable for substantial reduction or outright cancellation.

"11. Concerted national and international action is called for to address effectively debt problems of middle-income developing countries with a view to resolving their potential long-term debt-sustainability problems through various debt-treatment measures, including, as appropriate, orderly mechanisms for debt reduction, and encourages all creditor and debtor countries to utilize to the fullest extent possible, where appropriate, all existing mechanisms for debt reduction. Debt relief alone is not enough and should be complemented by trade liberalization

with special and differential treatment for developing countries, provision of ODA and foreign investment, as well as by necessary domestic reforms.

"12. In order to attract foreign investment, especially foreign direct investment, Governments are urged to put in place the policies, institutions and capacities needed for a market economy to function in a predictable, transparent, non-discriminatory and stable fashion, and in this regard, the international community should support the efforts of developing countries and countries with economies in transition, to attract FDI and to devise appropriate measures by providing assistance in capacity-building, in developing and implementing sound economic policies, and the transfer of environmentally sound technology to developing countries as stipulated in Agenda 21 and the Programme for the Further Implementation of Agenda 21. Ways and means of utilizing ODA for the leveraging of private investment in sustainable development should be further explored.

"13. Given the important role of the increase in private capital flows for supporting sustainable development, Governments, in cooperation with international organizations, are urged to consider and implement appropriate measures to increase them and enhance their productivity, as well as to address the volatility of short-term capital flows and its potential negative effects. Measures are also needed to improve institutions at the national and international levels in order to promote stable financial systems.

"Mobilization of domestic financial resources for sustainable development

"14. Considering the importance of mutually supportive international and national enabling economic environments in the pursuit of sustainable development, Governments are urged:

(a) To promote the mobilization of domestic financial resources and to establish the basis for an enabling environment through, *inter alia*, a sound macroeconomic framework, a dynamic private sector, improved governance, and participatory development;

(b) To increase cooperation for addressing capital flight in order to broaden the domestic resource base for financing sustainable development;

(c) Taking into account their levels of development and institutional capacity, to consider ways and means for the integration of environmental finance into mainstream public finance, and in this regard, to enhance coordination at the national level;

(d) In accordance with their levels of development and institutional capacity, to conduct studies and research on ways and means of implementing a range of economic instruments, including fiscal instruments, and the gradual phasing out of environmentally harmful subsidies; such policies should be decided by each country, taking into account its own characteristics and capabilities, especially as reflected in national sustainable development strategies, and should avoid adverse effects on competitiveness and on the provision of basic social services for all;

(e) To provide the necessary incentives for sustained private investment, including macroeconomic, legal and regulatory frameworks which would reduce risks and uncertainty for investors; assistance for capacity-building should be provided to developing countries to enable them to design effective environmental regulation and market-based instruments and to use them widely, taking into account their different levels of development and possible socio-economic impacts.

"Promotion of innovative financial mechanisms

"15. Governments are encouraged to promote the use of innovative financial mechanisms. In this regard, Governments in cooperation with international organizations and major groups should continue to engage in study and research on ways to make such mechanisms more practical and effective, including by learning from the experience of others and to adapt those mechanisms to the particular circumstances of individual countries. These mechanisms are not a substitute for increases in financial resources for

sustainable development from other sources, namely ODA, FDI and foreign portfolio investment.

"16. The clean development mechanism, which is a vehicle for increasing private-sector investment in projects in developing countries, can be an effective means of increasing the financial flows to developing countries once the Kyoto Protocol has been ratified and implemented. The Conference of the Parties to the United Nations Framework Convention on Climate Change are urged to take the necessary action to finalize and implement the mechanism as soon as possible.

"17. The Global Environmental Facility (GEF) should continue to be the principal mechanism for providing funding to developing countries and countries with economies in transition to pay for the incremental costs of providing global environmental benefits, and the augmentation of its resources should be considered in the discussions of the next replenishment.

"18. Innovative approaches should be pursued in order to strengthen the financial mechanism of the multilateral environmental agreements.

"Improvement of institutional frameworks and promotion of public and private partnerships

"19. There is a need to strengthen international cooperation efforts to improve the existing international financial system with a view to preventing recurrence of crises, and providing better mechanisms for crisis management in order to support and reinforce sustainable development.

"20. Governments, international organizations and major groups are urged to promote public-private partnerships to finance sustainable development.

"21. As recognized in Agenda 21, the cost of inaction could outweigh the financial costs of implementing Agenda 21. Therefore, all financial commitments entered into under Agenda 21, particularly those contained in chapter 33, and the provisions with regard to new and additional resources that are both adequate and predictable need to be urgently fulfilled.

"22. International organizations are urged to better coordinate their work in the area of finance for sustainable development in order to avoid duplication and to raise their effectiveness, focusing on their respective area of competence where they have a clear comparative advantage. In this regard, better cooperation and dialogue is needed between international organizations, including the Bretton Woods institutions, the United Nations Conference on Trade and Development, the United Nations Environment Programme, the United Nations Development Programme and GEF.

"23. Governments and international organizations should improve their coordination efforts, using the United Nations Development Assistance Framework, the comprehensive development framework proposed by the World Bank and the poverty reduction strategy process initiated by the World Bank and the International Monetary Fund.

"24. International organizations, Governments and major groups are encouraged to undertake further research in the following areas:

(a) The relationship between foreign direct investment and sustainable development, with a view to identifying how the compatibility of foreign direct investment with sustainable development can be enhanced;

(b) Capacity-building for the mobilization of foreign and domestic financial resources for sustainable development;

(c) 'Green' budget reforms as well as the various aspects of an effective implementation of environmental taxes and charges;

(d) Innovative international financial mechanisms.

"25. The Commission should convene an ad hoc intergovernmental panel to undertake an analytical study of the lack of progress in the fulfilment of the commitments made in the areas of finance, with a view to make recommendations to synchronize the progress on sectoral issues with cross-sectoral areas. The outcome of this panel can also contribute to the work of the Preparatory Committee for the high-level event on financing for development to be held in 2001.

but the work of such a panel should not be dependent on the results of the high-level event.

Notes

[a] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex II.

[b] General Assembly resolution S/19-2, annex.

B. Co-Chairmen's summary of discussion

Introduction

3. As part of the multi-year work programme agreed upon at the five-year review of the United Nations Conference on Environment and Development (UNCED) held in 1997, the Working Group met in New York from 22 to 25 February 2000 to review the progress achieved in the implementation of the objectives for financial resources and mechanisms as set out in chapter 33 of Agenda 21. It took into consideration the comprehensive five-year review. The Working Group aimed at providing inputs for the discussion of financial resources and mechanisms at the forthcoming eighth session of the Commission.

4. The discussion on financial resources and mechanisms was based upon the report of the Secretary-General on financial resources and mechanisms (E/CN.17/2000/2).

5. In support of the meeting of the Working Group and the eighth session of the Commission, an expert group meeting on finance for sustainable development was held at Nairobi from 1 to 4 December 1999. The meeting was the fifth in a series of expert group meetings that have been held since 1994 to provide inputs for discussion of financing for development in 2001. The Chairman of this expert group, Lin See-Yan, was present at the opening session of the Working Group to introduce his summary of that meeting.

6. It is important for countries to establish an enabling environment at both the domestic and international levels in order to eradicate poverty through sustainable development, taking into account all aspects of development, including trade, finance, debt, the environment and social development. This should be done in a spirit of partnership between developed and developing countries based on common but differentiated responsibilities and taking into account the development level of individual countries, as recognized in the Rio Declaration on Environment and Development and Agenda 21. As stated in chapter 33, paragraph 33.4 of Agenda 21, it is important to recognize that the cost of inaction could outweigh the financial costs of implementing Agenda 21 and that inaction will narrow the choices of future generations.

International finance and sustainable development

7. Many delegations emphasized that greater efforts are required to enhance the mobilization of external private capital and reduce its volatility. It was generally agreed that conditions need to be established to ensure that a larger number of developing countries will benefit from international investment flows. Delegations emphasized the importance of an immediate and sizeable increase of ODA to reach the agreed targets and of finding a lasting solution to the debt problem of developing countries, particularly the least developed countries, and eliminating the structural causes of debt and poverty.

8. It was generally agreed that ODA remains critical for the financing of sustainable development in developing countries, particularly for the poorest developing countries. Developing countries called upon developed countries to fulfil all the commitments of Agenda 21, particularly those contained in chapter 33, which call for new and additional resources that are adequate and predictable. At the same time, it was appreciated that a number of donor countries continually meet or exceed the agreed United Nations ODA target of 0.7 per cent of GNP. The trend towards untying ODA to respond better to development needs of developing countries was welcomed. The need to reverse the decline in ODA as a percentage of GNP and to reach the agreed United Nations target of 0.7 per cent of GNP as soon as possible was recognized.

9. It was emphasized that the effectiveness and efficiency of ODA needs to be enhanced. Some delegations expressed the view that donors should take into account the policy environment in recipient countries. It was also noted that a sense of ownership on the part of recipient countries is essential to increase the effectiveness of ODA, and that no new conditionalities should be imposed on the sovereignty

of recipient countries, which have the right to determine their development priorities.

10. Many countries stressed that ODA has yielded multiple payback to donor developed countries through information collection, knowledge accumulation and particularly through market research in recipient developing countries, and they urged ODA donor countries to comprehensively review the effects of ODA and make the results of such a review known to the general public.

11. One delegation expressed the view that ODA has declined for a number of reasons — public sector budget policies, new demands on available ODA and increasing demands from humanitarian emergencies, intensifying competition for public funds. In some cases, developing countries have adapted and progressed in this new environment, but other developing countries, especially those beset by conflict and political instability, face further marginalization. Multilateral ODA, especially from the multilateral development banks, has become more important, especially for the least developed countries.

12. In order to reverse the recent decline in private long-term foreign investment flows and for such flows to be spread more widely it was emphasized that the international community should support developing countries in their efforts to devise appropriate policy frameworks and strategies. This should include assistance in capacity-building. Some delegations stressed that recipient countries need to create a predictable, stable and non-discriminatory environment to become more attractive to foreign investors.

13. Some delegations stressed that in promoting FDI, environmental, economic and social considerations should be properly addressed in order to avoid any potentially negative effects of FDI on sustainable development. At the same time, the potential contribution of FDI to the transfer of environmentally sound technology to developing countries should be further pursued, in addition to the previously established undertakings of developed countries to facilitate the transfer of technology to developing countries on preferential terms, as mutually agreed upon.

14. It was generally agreed that debt relief programmes should form part of a comprehensive financial strategy for sustainable development. It will be essential to address the structural causes of indebtedness. The enhanced HIPC initiative, which links debt relief with poverty alleviation, is the first step in the right direction, and provides a deeper, broader and faster debt relief to heavily indebted poor countries committed to eradicating poverty. It was emphasized that more funding and an overall finance plan are necessary to finance the HIPC Trust Fund and secure the speedy implementation of the initiative.

15. Further steps for debt relief were also emphasized and various options were proposed. For example, it was proposed that both bilateral and multilateral creditors consider ways and means of identifying portions of debt assessed as unpayable for substantial reduction or outright cancellation. Other proposals were increasing the use of debt-for-environment swaps and inviting multilateral institutions and London Club creditors to continue to look for innovative solutions to multilateral debt.

16. One country stated that it has requested its debtors to repay their debts with the understanding that it will then extend to them grants of up to 100 per cent of the repaid amount to be used for programmes of poverty alleviation and priority areas of social development.

17. There was a suggestion that the Commission on Sustainable Development convene an ad hoc intergovernmental panel to undertake an analytical study of the lack in progress in the fulfilment of the commitments made in the areas of finance and technology transfer. This panel would make recommendations to synchronize the progress on sectoral issues with cross-sectoral areas. The outcome of this panel could also contribute to the work of the preparatory committee for the high-level international intergovernmental event on financing for development to be held in 2001.

Domestic finance and sustainable development

18. Some delegations noted that domestic resources will continue to be the main source for financing sustainable development and that countries need to develop an enabling environment to encourage the mobilization of additional financial resources. Key elements include a sound macroeconomic framework, a dynamic private sector, governance and participatory mechanisms. Special attention needs to be given to fiscal and budgetary policies, tax collection and transparency.

19. Some delegations observed that it is important to integrate environmental finance into mainstream public finance, but that this requires close cooperation between various ministries in order to avoid conflicts that can adversely affect the financing of sustainable development.

20. Many countries stressed that certain domestic policies, such as the creation of an enabling environment for financial resource mobilization, should not be imposed on developing countries or used as conditions for international financial cooperation. Furthermore, many countries also stressed that economic standards or models valid for developed countries have to be adapted to conditions in developing countries, as they have to take into consideration the specific characteristics in developing countries.

21. With respect to environmental taxes and charges, it was generally emphasized that these instruments, if carefully designed, can be useful. Therefore, they should be closely examined and studied. Developing countries expressed the need for these mechanisms to take into consideration the level of development and institutional and capacity-building aspects, and the need to ensure that the application of such measures does not negatively affect the competitiveness of their exports in world markets.

22. As regards the reduction or elimination of subsidies, it was emphasized that such action requires a careful review of the economic, environmental and social impacts, taking into account the different economic and social situations of individual countries and regions.

23. Some countries stressed the importance of the private sector in the promotion of sustainable development. It is important to provide the necessary framework for sustained private investment, including macroeconomic, legal and environmental policy frameworks that are clear, credible and stable. Privatization outcomes can be promoted when there is transparency, level playing fields and adequate regulatory supervision.

Innovative financial mechanisms

24. As far as international innovative financial mechanisms are concerned, the provision of financial resources of more than $2 billion in projects provided by GEF was appreciated. Efforts made by both GEF and its implementing agencies in obtaining over $5 billion of co-financing for projects were welcomed.

25. There was also a discussion on the clean development mechanism under the Kyoto Protocol, which as an international financial mechanism provides the possibility of channelling additional financial resources to developing countries for investments in sustainable development, especially from the private sector. It was emphasized that this new mechanism will be essential for the implementation of the Kyoto Protocol once it is ratified.

26. With regard to innovative domestic financial mechanisms, it was noted that these mechanisms have proved to be useful in such areas as electric power, water, telecommunications, sanitation and public transportation. However, some delegations emphasized that these mechanisms have not yet been fully exploited. It was mentioned that Governments are seeking private capital from home and abroad in order to be able to undertake infrastructure investment through public-private partnerships (build-operate-transfer) and joint ventures, as well as to establish micro-financing mechanisms for the informal and rural sectors. Many countries emphasized, however, that these mechanisms are not a substitute for increasing financial resources for development from other sources, namely ODA, FDI and foreign portfolio investment.

III. Economic growth, trade and investment

A. Possible elements for a draft decision of the Commission on Sustainable Development at its eighth session

27. The possible elements for a draft decision of the Commission on Sustainable Development at its eighth session on economic growth, trade and investment are the following:

"Introduction

"1. Activities regarding economic growth, trade and investment should be pursued in accordance with Agenda 21[a] and the Programme for the Further Implementation of Agenda 21,[b] with the overarching objective of sustainable

development. Further steps to achieve this should also build on the outcome of the tenth session of the United Nations Conference on Trade and Development (UNCTAD). In this regard, cooperation and coordination between UNCTAD, the United Nations Industrial Development Organization, the World Trade Organization (WTO), the United Nations Environment Programme (UNEP) and other relevant institutions should be strengthened.

"2. Trade and investment are important factors in economic growth and sustainable development. Unsustainable economic growth and the lack of growth can cause environmental degradation. Unsustainable pattern of production and consumption, particularly in industrialized countries, as identified in Agenda 21, are the major causes of continued deterioration of the global environment. Poverty-related problems have also exerted pressures on the environment in developing countries.

"3. There should be a balanced and integrated approach to trade and environment in pursuit of sustainable development, taking into account the economic, environmental and social aspects, as well as the different levels of development of countries without undermining the open, equitable and non-discriminatory character of the multilateral trading system or creating any disguised barriers to trade.

"4. In particular, for developing countries and countries with economies in transition it will be an important challenge to stimulate domestic investment and attract foreign direct investment (FDI) to achieve sustainable development. At the same time, the international community should strive to avoid the risks that can be associated with the volatility of short-term private capital flows and to enhance the contribution that investments can make to sustainable development.

"Priorities for future work

"5. Economic growth, trade and investment will be considered as part of the 10-year review of progress since the United Nations Conference on Environment and Development. Priority areas for future work will include the following:

(a) Promotion of sustainable development through trade and economic growth;

(b) Making trade and environment mutually supportive;

(c) Promotion of sustainable development through investment;

(d) Strengthening institutional cooperation and promotion of partnership.

"Promotion of sustainable development through trade and economic growth

"6. Governments and international organizations are urged to support efforts of developing countries in building capacity to eradicate poverty, improve living standards and achieve sustainable development, including environmental protection. The promotion of trade, investment and sustained economic growth is essential to support such efforts. Furthermore, appropriate policies have to be implemented at the national level to ensure equitable distribution of benefits and provision of basic social services to all.

"7. Governments in developed countries and international organizations are also urged to promote improved market access, technical assistance and capacity-building initiatives in favour of developing countries and countries with economies in transition with a view to helping them to increase export opportunities, promote export-oriented production and enhance their ability to trade, and to implement their commitment in existing international agreements, including the WTO Agreement. The international community should assist countries seeking integration into world trade system, in particular accession to WTO.

"8. Governments, in particular in developed countries, are urged to eliminate trade distorting policies, protectionist practices and non-tariff barriers to trade in order to improve market access for products of export interest to developing countries, in particular commodities, including agricultural products, and to devise ways and means to assist them in diversifying their export base.

"9. Market access conditions for agricultural and industrial products of export interest to least developed countries should be improved on as broad and liberal a basis as possible and urgent consideration should be given to the proposal for a possible commitment by developed countries to grant duty-free and quota-free market access for essentially all exports originating in least developed countries and other proposals to maximize market access for least developed countries. Consideration should also be given to proposals for developing countries to contribute to improved market access for least developed countries' exports. Furthermore, special and differential treatment provisions for developing countries should be fully implemented.

"10. More focused financial and technical assistance should be provided to address effectively the problem of food security in developing countries, as outlined in the Rome Declaration on World Food Security and the World Food Summit Plan of Action, and problems of net food importing countries.

"11. It is encouraged to ensure that the benefits arising from trade liberalization are equitably distributed and reach those living in poverty.

"12. International organizations are encouraged to examine ways to promote the indigenous development of environmentally sound technologies in developing countries and their transfer and dissemination to developing countries, including through the implementation of relevant provisions in the Trade-Related Intellectual Property Rights (TRIP) Agreement, in particular articles 7 and 66.2.

"13. Governments and international organizations, in collaboration with business communities and other representatives of civil society, are encouraged to promote markets for environmental products, technologies and services.

"Making trade and environment mutually supportive

"14. International organizations and Governments are urged to enhance understanding of the economic and social implications of trade measures for environmental purposes for countries at different levels of development.

"15. Governments and international organizations, such as WTO, and the secretariats of multilateral environmental agreements, are encouraged to cooperate and explore ways to enhance the synergies between trade liberalization and environmental protection in order to achieve sustainable development. All relevant parties are encouraged to identify and pursue opportunities where trade liberalization, including addressing trade distorting subsidies, holds particular promise for producing trade, environmental and developmental benefits.

"16. Certification and labelling schemes should be designed in a transparent and non-discriminatory manner and should not lead to disguised barriers to trade or to unjustifiable obstacles to market access. Governments and international organizations are urged to facilitate full participation of developing countries in the standard-setting process. They are also urged to further explore the concept of equivalency and its application.

"17. Effective environmental policies should be pursued both nationally and internationally. However, the use of environmental measures for protectionist purposes should be avoided. Governments should also avoid imposing unilateral measures inconsistent with Rio Declaration on Environment and Development principles," in particular principle 12.

"18. Governments, in accordance with their commitments under multilateral environmental agreements, are encouraged to assist developing countries in implementing their obligations under those agreements by providing technology transfer and promoting capacity-building.

"19. Governments and international organizations are urged to identify and address economic and developmental implications of multilateral environmental agreements as well as to further consider the relationship between multilateral environmental agreements and the WTO Agreement.

"20. The concepts of trade-related environmental impact assessment and sustainability impact

assessment need to be further explored and emphasis placed on the development of methodologies, while taking into account the different levels of development of countries, their domestic capacity and current disagreements on the concept of sustainability impact assessment. Any such assessments would be conducted at the national level in support of national policy development. Relevant international organizations should assist in facilitating a better understanding of these concepts.

"Promotion of sustainable development through investment

"21. Governments are encouraged to promote a stable, predictable, non-discriminatory and transparent investment climate that encourages domestic investment and foreign capital flows, including FDI, while regulating the activity of investors, as appropriate. Governments and international organizations in developed countries are encouraged to provide adequate support for developing countries in their efforts to formulate and implement the appropriate domestic policies.

"22. Governments and international organizations are encouraged to address the potential risks that may arise from the volatility of short-term capital flows.

"23. To enhance the potential of investment, including FDI, to contribute to sustainable development, it is recommended that Governments and international organizations, in cooperation with relevant private sector organizations and stakeholders:

(a) Explore ways to ensure that a larger number of developing countries and countries with economies in transition benefit from investment, in particular FDI;

(b) Seek to promote the use of environmental management systems in and transfer of environmentally sound technologies to subsidiaries of transnational corporations in developing countries and countries with economies in transition, as well as their diffusion to domestic companies in the host country;

(c) Explore possibilities for encouraging companies to take responsibility to promote sustainable development by applying best practices and promoting environmentally responsible corporate behaviour;

(d) Explore the potential for improving environmental performance along the supply chain and in waste management, in cooperation with other stakeholders;

(e) Explore the potential role of environmental guidelines for making investment more broadly supportive of sustainable development.

"24. Governments and international organizations are encouraged to develop mechanisms for the environmental appraisal of export credit projects, as well as mechanisms for exchange of best practices and information.

"Strengthening institutional cooperation and promotion of partnership

"25. International organizations are invited to conduct further research on the possible applications of the principles of the Rio Declaration on Environment and Development relevant to international trade, in particular the operationalization of the principle of common but differentiated responsibilities.

"26. Donor Governments and international organizations are urged to improve coherence and coordination, with full participation of recipient countries, in providing technical assistance to and promoting capacity-building in the recipient countries to enable them to benefit from globalization and trade liberalization and to better integrate into the world economy. Governments and international organizations are further encouraged to promote capacity-building with a view to enabling them to implementing and enforcing effective environmental policies, including through the design and use of economic instruments, taking into account the specific conditions and the different levels of development in individual countries.

"27. Governments and international organizations should foster partnership between public and private sectors at the national and international level for the promotion of trade and economic growth in a manner conducive to

sustainable development and promote dialogue and consultations with stakeholders and civil society organizations.

"28. International cooperation and support for capacity-building in trade, environment and development should be strengthened through renewed system-wide efforts and with greater responsiveness to sustainable development objectives by the United Nations, WTO, the Bretton Woods institutions and national Governments.

Notes

[a] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex II.

[b] General Assembly resolution S/19-2 of 28 June 1997, annex.

[c] *Report of the United Nations Conference on Environment and Development* ... resolution 1, annex I."

B. Co-Chairmen's summary of discussion

Introduction

28. The discussion on economic growth, trade and investment was based on the report of the Secretary-General (E/CN.17/2000/4). It took into consideration the comprehensive five-year review of UNCED undertaken in 1997 at the nineteenth special session of the General Assembly, as well as the Bangkok Declaration and the Plan of Action adopted at the tenth session of UNCTAD, which was held at Bangkok from 12 to 19 February 2000.

29. Trade and investment are essential for sustained economic growth and sustainable development. Some delegations emphasized that trade and investment policies must, however, be complemented by policies that provide for high levels of environmental and social protection and enforcement of these laws at the national level. While some developing countries have benefited from globalization and trade liberalization, there is still a need to address the issue of marginalization, in particular of the least developed countries, and to support the integration of developing countries into the world economy. There is a need for new initiatives to ensure that developing countries, especially the least developed countries, are able to reap the full benefits of trade liberalization and share in international trade. Some delegations stressed the need for effective environmental policies to maximize the contribution of trade liberalization to sustainable development. There is also a need to consider links between trade liberalization and the social dimensions of sustainable development. Technical assistance and capacity-building initiatives in favour of developing countries must be identified. There is a need for improved coherence and coordination between donors and international organizations.

30. In developing countries, poverty eradication, supported by sustained economic growth and sustainable development, is the overriding priority. Accordingly, market access for products from developing countries should be further improved and special measures need to be implemented in favour of the least developed countries. Furthermore, many developing countries stressed that commitments contained in Agenda 21 and the Programme for the Further Implementation of Agenda 21, particularly in the areas of finance and transfer of technology, should be fully implemented.

31. As agreed in Agenda 21, developed countries should take the lead in addressing unsustainable production and consumption patterns, taking into account the principle of common but differentiated responsibilities. Several delegations also recognized the importance of keeping the public informed and engaging in regular dialogue between Governments and stakeholders.

Trade and economic growth

32. Both economic growth and the lack of it can have adverse environmental effects. Several delegations emphasized that economic growth must be pursued in the broader context of sustainable development, which integrates economic, social and environmental policies. Many delegations stressed that there is a need to progressively decouple economic growth from environmental stress in the developed countries.

33. In developing countries environmental stress, particularly pressure on the natural resource base, is largely the result of poverty, underdevelopment and the absence of alternatives, such as more sustainable livelihoods. Therefore, eradicating poverty is an

overriding objective of sustainable development. Trade is an important instrument for economic growth, and only through economic growth can developing countries meet the basic needs of their population and generate resources to address more adequately their priority environmental concerns.

34. A number of delegations said that, as reflected in the outcome of the tenth session of UNCTAD, greater efforts are required on matters of concern to developing countries, such as market access, commodities issues, access to and transfer of technologies, and capacity-building.

Trade and environment

35. The parameters for an agenda on trade, environment and sustainable development have been set out in Agenda 21 and the Programme for the Further Implementation of Agenda 21. In particular, many delegations stressed the need to address the issues of access and transfer of environmentally sound technologies at affordable terms more vigorously. Some delegations noted that the key issue is not access to such technologies but rather the terms of such access, in particular where technologies are mandated under multilateral environmental agreements.

36. Several delegations stressed that progress should be made in identifying appropriate forms of traditional knowledge, including options for benefit-sharing as identified in the Convention on Biological Diversity.

37. A number of delegations emphasized that sustainability impact assessments could be useful instruments to be applied at the national level to facilitate the integration of economic, social and environmental objectives. It was also noted, however, that there are diverse perspectives on the concept of such assessments and that further work is needed to build consensus. In any case, such assessments must be conducted at the national level in support of national policy development. There is also a need to take into account the limited capacities and resources, especially in developing countries, to conduct them.

38. Many delegations stressed that for developing countries to benefit fully from trading opportunities for environmentally preferable products, many obstacles, including certification issues, remain to be overcome.

39. An open, non-discriminatory and equitable multilateral trading system that enables countries to improve their economic structures and the functioning of commodity markets is essential for achieving sustainable development. Environmental measures should not be used for protectionist purposes.

40. Developing countries should be able to participate effectively in international standard-setting. Many delegations stressed that there is a need for capacity-building and other forms of assistance in favour of developing countries.

41. There is a need to enhance the contribution that trade liberalization can make to sustainable development. Many delegations emphasized the need for safeguarding and improving market access for products from developing countries, promoting new trading opportunities, removing trade obstacles and exploring "win-win-win" scenarios. For example, many delegations emphasized the need to eliminate or reduce subsidies, in particular agricultural export subsidies. One delegation observed that "win-win" scenarios could also be explored with regard to labour standards.

42. Delegations welcomed the decision on further work on trade and environment contained in paragraphs 146 and 147 of the Plan of Action adopted by UNCTAD at its tenth session. In accordance with these paragraphs, UNCTAD's work, in cooperation with other relevant organizations, should focus on helping to ensure balance in the trade and environment debate by highlighting issues of concern to developing countries and strengthening the development dimension; promote analysis and consensus-building, focusing on a range of issues that could yield potential benefits to developing countries; and identifying specific capacity-building needs of developing countries and promoting a broad programme of capacity-building on trade, environment and development.

43. Several delegations were of the view that the Commission should encourage further work on the trade implications of environmental principles as well as on the application of the principle of common but differentiated responsibilities.

44. Several delegations emphasized the need for strengthened cooperation between WTO, UNCTAD, UNEP and other relevant organizations. There was a broad convergence of views on the need for a broad programme of capacity-building in the area of trade, environment and development. There is a need for strengthened coordination between different

institutions involved in capacity-building. Several delegations welcomed the UNCTAD/UNEP initiative for cooperation in capacity- and confidence-building launched at the tenth session of UNCTAD.

Foreign direct investment

45. Delegates stressed the increasing importance of private flows of FDI to developing countries. A larger number of developing countries should benefit from FDI, for example in sub-Saharan Africa. Some delegations emphasized the need to ensure stable, predictable, non-discriminatory and transparent investment climate to encourage domestic and foreign direct investment. They also encouraged developing countries to develop appropriate domestic policies, legal and institutional frameworks for attracting FDI, and recommended that assistance in the form of capacity-building be made more broadly available.

46. Foreign direct investment has the potential to support the economic, environmental and social objectives embodied in sustainable development. There was a broad convergence of views, for example, on the need to enhance the potential contribution of transnational corporations to sustainable development, as had been discussed in a seminar on making FDI work for sustainable development held before the tenth session of UNCTAD. Some delegations stressed that investors' rights need to be accompanied by responsibilities. They also referred to the possibilities to encourage voluntary commitments, approaches on "corporate behaviour" and investors' responsibilities. Some delegations emphasized that verifiable public reporting on sustainable policies and performance are key elements of any approach. Some encouraged multi-stakeholder approaches to promote environmentally sound FDI. Some delegations referred to the need to eliminate business practices that restrict the transfer of environmentally sound technologies.

47. The financial services sector had a key role to play in enhancing the contribution of FDI to sustainable development, and UNEP's financial institutions initiative was an excellent example on how to influence business practices towards sustainable development. Some developed country delegations also supported the development of environmental guidelines to determine which investment project should benefit from export credits and other support for overseas investment. The need for capacity-building in the area of investment and sustainable development was also emphasized.

IV. Adoption of the report of the Working Group

48. At its 7th meeting, on 25 February 2000, the Working Group had before it the draft report (E/CN.17/ISWG.II/2000/L.1) as well as informal papers.

49. At the same meeting, the Working Group took note of the informal papers and adopted its report.

V. Organizational and other matters

A. Opening and duration of the session

50. The Inter-sessional Ad Hoc Working Group on Financial Resources and Mechanisms and on Economic Growth, Trade and Investment of the Commission on Sustainable Development met in New York from 22 to 25 February 2000, in accordance with Economic and Social Council decision 1999/280 of 29 July 1999. The Working Group held seven meetings (1st-7th).

51. The session was opened by the Chairman of the Commission on Sustainable Development, Juan Mayr Maldonado (Colombia).

52. The Director of the Division for Sustainable Development of the United Nations Secretariat made an introductory statement.

53. The Chairman of the Expert Working Group on Finance made a statement.

B. Election of officers

54. At its 1st meeting, on 22 February, the Working Group elected Ahmed Ihab Gamaleldin (Egypt) and Choi Seok-young (Republic of Korea) as Co-Chairmen by acclamation.

C. Agenda and organization of work

55. At its 1st meeting, on 22 February, the Working Group adopted its provisional agenda contained in

document E/CN.17/ISWG.II/2000/1 and approved its organization of work. The agenda was as follows:

1. Election of officers.
2. Adoption of the agenda and other organizational matters.
3. Financial resources/trade and investment/ economic growth.
4. Other matters.
5. Adoption of the report of the Working Group.

D. Attendance

56. The session was attended by representatives of 38 States members of the Commission on Sustainable Development. Observers for other States Members of the United Nations and for the European Community, representatives of organizations of the United Nations system and secretariats of treaty bodies as well as observers for intergovernmental and non-governmental organizations also attended.

E. Documentation

57. The Working Group had before it the following documents:

(a) Report of the Secretary-General on financial resources and mechanisms (E/CN.17/2000/2);

(b) Report of the Secretary-General on economic growth, trade and investment (E/CN.17/2000/4);

(c) Note verbale dated 14 February 2000 from the Permanent Mission of Kenya to the United Nations addressed to the Secretary-General (E/CN.17/2000/9).

Annex

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Entities represented by observers

European Community

Non-member States represented by observers

Switzerland

Specialized agencies and related organizations

International Labour Organization, Food and Agriculture Organization of the United Nations, United Nations Educational, Scientific and Cultural Organization, United Nations Industrial Development Organization, World Trade Organization

Secretariats of treaty bodies

Convention on Biological Diversity

Intergovernmental organizations

Commonwealth Secretariat

Non-governmental organizations

Global Education Associates
International Association of Lawyers
International Chamber of Commerce
Norwegian Forum for Environment and Development
World Council of Churches
World Wide Fund for Nature International

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Report of the Inter-sessional Ad Hoc Working Group on Integrated Planning and Management of Land Resources; and on Agriculture

New York, 28 February-3 March 2000

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Introduction

1. The role of the meeting of the Inter-sessional Ad Hoc Working Group on Integrated Planning and Management of Land Resources, and on Agriculture was to serve as preparation for the eighth session of the Commission on Sustainable Development and to facilitate the Commission's achieving tangible, action-oriented results on the issues of integrated planning and management of land resources and agriculture. As agreed by the Working Group, the meeting produced two papers each on the two substantive items in its agenda. These papers were prepared by the Co-Chairmen of the Working Group on the basis of the discussions held during the meeting and comments made and proposals submitted on the preliminary drafts by the participants, but were not formally negotiated. The Working Group also authorized the Co-Chairmen, in consultation with the secretariat, to finalize the present report, taking into account views raised at its closing meeting, for submission to the Commission at its eighth session. The report comprises the following papers:

(a) The possible elements for draft decisions on land and agriculture issues that could serve as starting points for further deliberations and negotiations during the eighth session of the Commission on Sustainable Development (sects. II.A and III.A below), it being expected that delegations and groups will further study these papers in the period between the meeting of the Working Group and the eighth session of the Commission with a view to formulating their positions in preparation for negotiations in the drafting group during the session of the Commission;

(b) The Co-Chairmen's summaries of the discussions on integrated planning and management of land resources and agriculture, which attempt to reflect the overall thrust of the discussions in the Working Group and the main positions stated by delegations, and which record, when necessary, alternative views and proposals. These summaries will not be further modified and will be included as reference material on a given issue in the report to the Commission on Sustainable Development.

I. Integrated planning and management of land resources

A. Possible elements for a draft decision by the Commission on Sustainable Development at its eighth session

1. Introduction

2. The main objectives of activities in the area of integrated planning and management of land resources must be pursued in full accordance with Agenda 21[1] and the Programme for the Further Implementation of Agenda 21.[2] It is important that countries address sustainable development through a holistic approach, such as ecosystem-based management. This approach would address interactions among land resources, water, air, biota and human activities, in order to meet the challenges of desertification and drought, sustainable mountain development, deforestation, climate change, rural and urban land use, and conservation of biological diversity.

3. The importance of integrated planning and management of land resources derives from the unprecedented population pressures and demands of society on land, water and other natural resources, as well as the increasing degradation of resources and threats to the stability and resilience of ecosystems and the environment as a whole. These trends highlight the need to ensure access to land, water and other natural resources. They also affect food security in many developing countries, global environmental balance and the well-being of present and future generations.

4. The challenge is to develop and promote sustainable and productive land-use management systems as part of national strategies for sustainable development and to protect critical resources and ecosystems through balancing land, water and other natural resource uses with the participation of stakeholders. Social and health aspects of land use deserve particular attention and should be integrated into the overall planning process.

2. Priorities for future work

5. The next comprehensive discussion by the Commission on Sustainable Development of integrated planning and management of land resources will take place at the overall review of the implementation of

Agenda 21 in 2002. The review will benefit from the outcome of the eighth session of the Commission. Priority areas for future work should include the following:

- Prevention and/or mitigation of land degradation;
- Access to land and security of tenure;
- Critical sectors and issues: biodiversity, forests, arid land, mountain areas, wetlands and coastal zones, natural disasters, and rural-urban interactions;
- Stakeholder participation;
- International cooperation.

3. Prevention and/or mitigation of land degradation

6. Governments and the international community are urged to undertake concerted efforts to alleviate poverty as a crucial means for reducing land degradation, desertification, deforestation and destruction of biological diversity.

7. Governments and the international community are encouraged to promote soil conservation and vegetation protection, and enhancement measures, as a prerequisite of sustainable land management, food production, food security, the protection of biological diversity and the prevention of natural disasters. In this regard, developed countries and international organizations are urged to provide information on appropriate technologies on land degradation and soil conservation measures as well as to promote access to those technologies.

8. Governments are encouraged to strengthen national, regional and local institutional frameworks for cross-sectoral cooperation in the formulation and implementation of land policies, taking into account specific national conditions and legislation.

9. Governments are encouraged — taking into account work being done by, *inter alia*, the United Nations Environment Programme (UNEP), the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Centre for Human Settlements (Habitat) and the regional commissions, other United Nations bodies and the Commission on Sustainable Development, as well as national organizations — to further consider the development and use of appropriate land-use indicators and monitoring systems for the purpose of assessing progress in the implementation of programmes for sustainable development.

4. Access to land and security of tenure

10. Governments are encouraged, according to their respective culture and traditions, to adopt policies and implement laws that guarantee well-defined and enforceable property rights and improved access to land and security of tenure, in particular for disadvantaged groups, including people living in poverty, women and indigenous groups.

11. Governments, where appropriate, are encouraged to develop adequate land administration systems supporting sustainable land tenure on the basis of land cadastres, land management, land valuation, land monitoring and supervision of land use.

12. Governments are encouraged to include traditional land owners, land users and the landless as active participants, when undertaking land tenure reform, including the development of land cadastres, so as to focus on making traditional land owners and land users active participants in the planning and development of land resources.

5. Critical sectors and issues

Biodiversity

13. Governments are urged to implement the Convention on Biological Diversity,[3] bearing in mind that many areas of work under the Convention seek to ensure that land management decisions promote the conservation and sustainable use of biological resources. In this regard, Governments and the international community should ensure that the effects of biotechnology products on health and the environment are fully explored before being introduced in the market. To that effect, Governments and the international community are urged to take the necessary steps to ensure that the Cartagena Protocol on Biosafety to the Convention (adopted by the Conference of the Parties to the Convention on Biological Diversity at the resumed session of its first extraordinary meeting, held in Montreal from 24 to 29 January 2000) enters into force.

Forests

14. Governments and the international community are urged to effectively implement proposals for action emanating from the Intergovernmental Panel on Forests (IPF)/Intergovernmental Forum on Forests (IFF), in order to prevent negative aspects of unsustainable forest and land-use practices.

Arid Land

15. Governments and the international community are urged to undertake appropriate measures to address the degradation of fragile land resources and the depletion of scarce water resources in arid areas, especially where there are high-population pressures.

Mountain Areas

16. Governments are urged to adequately plan and manage land resources in mountainous areas and associated lowlands, whose ecological processes are highly interdependent, and which are crucial for the integrated management of watersheds. In this regard, Governments and other mountain key players are also urged to recognize that small-scale production systems take the best advantage of the niche economies that characterize fragile and complex mountain environments.

17. In cases where mountain resources are tapped for general use, Governments are further urged to ensure that a significant proportion of derived benefits is reinvested locally, so as to ensure continued conservation and sound management of these critical land areas by local communities.

Wetlands and coastal zones

18. Governments are encouraged to take into account the importance of conserving wetlands and critical coastal zones, including protected areas and other fragile ecosystems, in the formulation of national and subnational sustainable development strategies.

Natural disasters

19. Governments and the international community are encouraged to formulate and implement preventive strategies — including the development of appropriate early warning systems — to deal with natural disasters, such as floods and droughts, as well as disasters associated with phenomena such as El Niño, which result in land degradation. In this regard, relevant international organizations are urged to provide remedial support to developing countries and those with economies in transition.

Rural-urban interactions

20. Governments are urged to take strategic land management approaches aimed at creating conditions in which the development of human settlements can benefit disadvantaged groups, especially poor people living in rural and urban areas.

21. Governments are encouraged to take into account land-use interdependence between rural and urban areas, and undertake implementation of integrated approaches to their administration, which is essential to sustainable rural and urban development and a more sustainable livelihood for people living in poverty.

22. Governments are urged to take into account the strategic role of local authorities in sustainable land use.

23. The United Nations system is urged to support Governments in further promoting the implementation of the Habitat Agenda,[4] adopted by the United Nations Conference on Human Settlements (Habitat II) (Istanbul, June 1996) and in linking it to the implementation of Agenda 21, including local Agenda 21 programmes.

6. Stakeholder participation

24. Governments are urged to develop or strengthen institutional frameworks for effective access to information and participation of all stakeholders, including women, people living in poverty and indigenous and local communities, in land-use planning and management in both rural and urban contexts.

7. International cooperation

25. Governments and the international community are urged to fulfil the financial commitments as set out in chapter 33 of Agenda 21, in view of supporting the further implementation of integrated planning and management of land resources in developing countries.

26. Governments and the international community are further urged to provide technological assistance to developing countries and countries with economies in transition to implement the integrated planning and

management of land resources, as recommended in Agenda 21.

27. Governments are encouraged to strengthen regional and international cooperation in the area of integrated planning and management of land resources and monitoring systems, *inter alia*, through information exchange and experience sharing, taking into account national, regional and international experiences, including those of United Nations organizations and the regional commissions.

28. Governments are urged to further promote the transfer of appropriate technologies, including geographical information systems (GIS) and global positioning systems (GPS), for integrated planning and management of land and other natural resources that are best adapted and suited to local conditions so that capacity-building, particularly in developing countries, is adequate to cope with critical challenges.

29. Governments are urged to promote land-related research, and extension and dissemination of technological information and innovative practices, and to undertake training programmes for farmers and agro-food industries and other relevant stakeholders. In this regard, developed countries and the international community are urged to improve access to up-to-date information and technology by developing countries.

30. The Commission on Sustainable Development encourages all Governments to implement relevant international agreements, including the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa (A/49/84/Add.2, annex, appendix II), as vital instruments for achieving integrated planning and management of land resources, and calls for additional support for their implementation.

31. Governments are urged to sign and ratify the relevant conventions and to take account of the complementarities among the three Rio instruments, namely, the Rio Declaration on Environment and Development,[5] Agenda 21 and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests,[6] as well as other relevant international instruments, in order to improve land-use and land management, to promote sustainable forest and land-use practices and to generate the multiple benefits that may accrue from the implementation of these instruments, in particular with respect to combating desertification, loss of biodiversity and degradation of freshwater resources.

32. Governments are urged to ratify and implement the Kyoto Protocol[7] to the United Nations Framework Convention on Climate Change.[8]

33. The United Nations and other international and bilateral development organizations are urged to strengthen their efforts, through financial support, transfer of environmentally sound technologies, capacity-building and education and training.

B. Co-Chairmen's summary of discussions

1. Introduction

34. As part of the multi-year work programme of the Commission on Sustainable Development adopted by the General Assembly in 1997 at its nineteenth special session,[9] the Commission's Inter-sessional Ad Hoc Working Group on Integrated Planning and Management of Land Resources; and on Agriculture met in New York from 28 February to 3 March 2000. The Working Group reviewed progress achieved in the implementation of the objectives for integrated planning and management of land resources as set out in chapter 10 of Agenda 21. It took into consideration the comprehensive review of the implementation of Agenda 21 undertaken in 1997.

35. The discussions of the Working Group were intended as inputs for the consideration of integrated planning and management of land resources by the Commission on Sustainable Development at its eighth session, to be held from 24 April to 5 May 2000.

36. The Working Group's discussion of the issue was based upon the report of the Secretary-General entitled "Integrated planning and management of land resources" (E/CN.17/2000/6) and its addenda.

37. The integrated planning and management of land resources cover soils, minerals, water, air, biological resources and landscape. Effective planning and management of land resources must take into account economic, social, environmental and cultural aspects of land use. The goals of integrated planning and management of land resources are protection of the environment, economic development, poverty eradication, employment creation, conservation of

natural resources, food security, protection of critical ecosystems and biodiversity, and ensuring access to land for vulnerable and marginalized groups. The social and health impacts of land use should also be taken into account.

38. A number of delegations described their national efforts to develop systems for integrated planning and management of land resources, including decentralization of land management to local levels, with broad stakeholder participation.

2. Land degradation

39. Terrestrial ecosystems and land productivity are being threatened by rapid large-scale changes in land use and land cover, water pollution, climate change, desertification, drought and other natural disasters, and unsustainable practices in agriculture, grazing, forestry and mining.

40. Many problems of land degradation cannot be effectively addressed without the reduction and eradication of poverty and hunger. Poverty is both a consequence, and one of the causes, of land degradation.

41. Soil protection measures are important for increasing food production, ensuring food security and protecting biological diversity.

42. Land degradation is also caused by lack of adequate technologies, information, training and financial resources.

43. Identification of critical areas of actual and potential land degradation can be important for determining priorities for land conservation efforts. Critical areas often include mountain areas, arid zones, upland forests, tourist areas and marginal agricultural land. In general, it is much more expensive to rehabilitate degraded land than to prevent land degradation. Identification and protection of critical ecosystems are crucial for protecting water resources and biodiversity.

3. Land management systems

44. Integrated planning and management of land resources require decision-making frameworks that are interactive, transparent and participatory, including national and local institutions and other stakeholders. Local Agenda 21 programmes can play an important role. Development and strengthening of integrated land planning and management systems in developing countries require increased international and national support.

45. In the planning and management of land resources, economic, social and environmental goals can be mutually supportive.

46. There is a need in many countries to improve the security of land tenure and access to land for vulnerable and marginalized groups, including women, poor people and indigenous people and their communities. Efforts to improve land tenure systems must include traditional land owners and users as active participants. Land tenure arrangements have social, economic and environmental aspects and responsibilities and are governed by culture, tradition and legal frameworks. One delegation expressed the view that in undertaking land tenure reform, a single national policy should be implemented to ensure equal access to land resources for all stakeholders.

47. Extraction of mountain resources can result in enormous costs to society if they are exploited without due regard for the constraints and fragility of mountain environments. Mountain areas are particularly vulnerable to erosion and irreversible degradation, with serious impacts on water supplies downstream. Management of forestry, mining and tourism in mountain areas is particularly important, taking into account the needs of the inhabitants who are often poor and politically marginalized. An integrated management approach to watersheds is of crucial importance because of their role in the supply of freshwater.

48. Integrated planning and management of land resources require integrated information systems accessible to all stakeholders. Information technologies, including GIS, remote sensing and GPS, offer valuable technologies for land planning and management.

49. Sustainable urban planning is of crucial importance both for poor urban residents and for rural people. Managing urban growth, developing urban infrastructure, strengthening urban-rural linkages, and controlling urban sprawl and congestion are essential for creating sustainable livelihoods in both rural and urban areas and promoting sustainable land use.

50. Countries with economies in transition are facing the challenge of developing systems of private land

ownership, land registration and land markets, as well as land management systems, taking into account the rights of traditional users of land resources.

51. Integrated planning and management of land resources require broad coordination and participation, including coordination of efforts at the national, ecosystem and community levels, intersectoral coordination, public-private partnerships and multi-stakeholder participation. Specific mechanisms for coordination and participation depend on the particular conditions of each country.

4. Regional and international cooperation

52. Regional strategies and programmes are important for addressing transboundary impacts of land degradation, as well as for addressing common problems. FAO, UNEP and other international organizations can provide valuable support for such regional efforts.

53. The challenge for the United Nations and other international and bilateral development organizations is how to strengthen and support national and regional efforts, through financial support, transfer of environmentally sound technologies, capacity-building, and education and training.

54. Assistance to developing countries in developing information and monitoring systems, including appropriate land-use indicators, can be provided by UNEP, FAO and the United Nations Centre for Human Settlements (Habitat).

55. International and regional collaborative programmes can improve understanding of ecosystems and the identification and adaptation of sustainable land planning and management practices.

56. Trade liberalization can have both positive and negative impacts on land resources. Trade policies that result in declining prices for agricultural commodities, fluctuations in exchange rates and unsustainable debt burdens are obstacles to sustainable development and effective land resource management. Trade liberalization to enhance market access, in particular for products of developing countries, in conjunction with appropriate national economic and agricultural policies, can contribute to efforts to protect land resources. Further study is needed of the impacts of trade liberalization policies on sustainable land use.

57. Increased resources and investments are needed for capacity-building for integrated planning and management of land resources in developing countries. The United Nations system, including, *inter alia*, FAO, UNEP, the United Nations Centre for Human Settlements (Habitat) and the United Nations Development Programme (UNDP), can assist in this process.

58. There is a need for further international exchange of knowledge, information and best practices, using the latest technologies, including information technologies, to advance sustainable land development. International harmonization of land classification and information systems can support the exchange of information and experience.

59. Transfer of new technologies, including information technologies such as GIS, remote sensing and GPS, adapted and suited to local conditions, is crucial for improving the capacity for integrated planning and management of land resources in developing countries.

60. International instruments, including the United Nations Convention to Combat Desertification, the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change and its Kyoto Protocol, provide a framework for international cooperation in the planning and management of land resources.

61. Many delegations stressed that the United Nations Convention to Combat Desertification, the only convention specifically aimed at redressing land degradation in developing countries, had not received adequate support as a vital instrument of integrated planning and management of land resources. Some delegations noted that a number of African countries had undertaken activities under the Convention with support from donor countries. Implementation of the provisions of the Convention, including forest rehabilitation, with adequate financial backing for the Global Mechanism, following the model of the Global Environment Facility (GEF), could make an important contribution to land planning and management.

62. Progress towards strengthened international cooperation in forest management through IFF and the proposed new international arrangement on forests can also contribute to improved land management.

63. The implementation of the Habitat Agenda, coordinated with the implementation of Agenda 21, is important for urban development and management. The United Nations system and the international community can play an important role in this effort.

64. Many delegations stressed that official development assistance (ODA) had been declining and expressed regret that adequate external funding, including ODA, had not materialized. They noted the need for new and additional funding for sustainable development and the implementation of Agenda 21 and called for adequate and predictable financial resources. For most developing countries, especially those in Africa and the least developed countries, ODA remains the main source of external funding and can be complemented by private capital flows. The debt burden of developing countries is also an obstacle to sustainable development and effective management of land resources.

II. Agriculture

A. Possible elements for a draft decision by the Commission on Sustainable Development at its eighth session

1. Introduction

65. Agriculture as an economic sector is being considered by the Commission on Sustainable Development at its eighth session from the broad perspective of sustainable development, highlighting the linkages between economic, social and environmental objectives. As contained in Agenda 21, particularly chapter 14, and the Programme for the Further Implementation of Agenda 21, adopted by the General Assembly at its nineteenth special session, agriculture has to meet the fundamental challenge of satisfying the demands of a growing population for food and other agricultural commodities, especially in developing countries. The particular focus of the discussion has been promoting sustainable agriculture and rural development (SARD), in accordance with the principles of the Rio Declaration on Environment and Development and the internationally agreed objectives contained in chapter 14 of Agenda 21 as well as, *inter alia*, the Rome Declaration on World Food Security[10] and the World Food Summit Plan of Action[11] adopted by the World Food Summit (Rome, November 1996). The basis for achieving SARD in all countries is contained in these and other commitments; what is needed is their full implementation at all levels.

66. Agriculture has a unique place in society because it ensures the production of food and fibre, food security and safety, social and economic development, maintenance of the countryside and conservation of nature, and sustains rural life, ensuring spatially balanced development. The major objective of SARD is to enhance food security (defined as access to the food required for a healthy and productive life) in an environmentally sound way so as to contribute to sustainable natural resource management. Food security — although a policy priority for all countries — remains an unfulfilled goal. About 790 million people living in developing countries and 34 million in industrialized countries and in countries with economies in transition are undernourished. While some improvement in the situation has recently been noted, the international community must be concerned that the average annual decrease of undernourished people is insufficient to achieve the target set at the 1996 World Food Summit to reduce by half the number of undernourished by 2015 (Plan of Action, para. 7).

67. Food security and poverty are interrelated and sustainable progress in poverty eradication is one of the critical elements in improving access to food. About 1.5 billion people in the world live in poverty and recent trends indicate this number could rise to 1.9 billion by 2015. In addition, the gap between rich and poor is widening, and the poor in general — especially disadvantaged groups, such as women, the rural poor and indigenous communities — are being increasingly marginalized. The inextricable link between hunger and poverty means that the goals of achieving food security in the context of SARD and pursuing the eradication of poverty, among both urban and rural poor, as agreed, *inter alia*, at the World Summit for Social Development (Copenhagen, 1995), have to be addressed in an integrated manner. It remains essential to continue efforts for the eradication of poverty, through, *inter alia*, capacity-building to reinforce local food systems and improving food security. The concept of sustainable agriculture and rural development offers such an approach.

2. Priorities for action

(a) Implementation of sustainable agriculture and rural development (SARD) goals

68. Governments are encouraged to complete the formulation and elaboration of national strategies for sustainable development as agreed in the Programme for the Further Implementation of Agenda 21 as soon as possible. In this regard, Governments are encouraged to integrate agricultural production, food security, safety and quality of foods, environmental protection and rural development as central elements in those strategies.

69. All Governments are urged to reaffirm their individual and collective commitments to ensuring food security, through primarily enhancement of domestic food production, combined with the importation and storage of food, and to reaching the important goal to reduce the number of undernourished people by one half by 2015, as agreed at the World Food Summit.

70. Governments should take a cross-sectoral approach to integrating agriculture in rural development frameworks and strategies so as to maximize synergies and improve coherence.

71. Governments are urged to promote agricultural practices based on sustainable natural resource management, including, *inter alia*, integrated farm input management, agro-ecological, organic, urban and peri-urban agriculture, minimum tillage and agroforestry, that can provide sustainable management of all types of production systems and other benefits, such as soil and land conservation, agro-biodiversity enhancement and carbon sequestration. Organic farming also contributes to SARD and should be promoted, when appropriate. Environmentally sound traditional and local knowledge should be recognized and protected.

72. Governments are urged to develop coherent national policy and legal frameworks for sustainable rural development, with the emphasis on, *inter alia*, economic diversification, capacity-building, participation, empowerment and partnerships.

73. Governments are encouraged to continue studying the possible role of the multifunctional character of agriculture, as described in chapter 14 of Agenda 21, in promoting SARD, taking into account the discussions in FAO and other international organizations.

74. Governments are encouraged to pursue an ecosystem approach to SARD, taking into account, *inter alia*, the actions necessary to mitigate the negative impacts and to enhance the positive impacts of agriculture and animal production on natural ecosystems, in particular on those with high biodiversity. The international community is urged to support the United Nations Convention to Combat Desertification and its Global Mechanism which should also contribute to conserving and rehabilitating the natural resources in lower-potential land and to control land degradation, especially in developing countries.

75. Governments should take account of the effects of agriculture on human health in terms of both consumption and production. Effective health protection is also necessary to ensure food security.

76. The Conference of the Parties to the United Nations Framework Convention on Climate Change, the Conference of the Parties to the Convention on Biological Diversity, the Global Mechanism of the United Nations Convention to Combat Desertification and the governing body of GEF, within their established work programmes, are encouraged to promote the use of their funding mechanisms to support national programmes promoting SARD that result, *inter alia*, in the conservation and the sustainable use of agro-biodiversity, reduced greenhouse gas emissions and increased carbon sequestration, as well as increased investments in energy efficiency and the use of renewable energy sources.

77. The Conference of the Parties to the Convention on Biological Diversity and Governments are encouraged to support the strengthening and effective implementation of the work programme of the Convention on agricultural biological diversity and to support FAO and other relevant institutions in their roles in the implementation of this work programme.

(b) Access to resources

78. Governments are encouraged to adopt and implement national policies and laws that guarantee equitable ownership, access to land and security of tenure through well-defined and enforceable land property rights, in particular for disadvantaged groups, including people living in poverty, women, indigenous

and local communities. Access to credit, particularly through rural microcredit schemes, is also important.

(c) Poverty eradication

79. All Governments and the international community are urged to implement the relevant commitments they have entered into for the eradication of poverty, including those contained in the Copenhagen Declaration on Social Development[12] and Programme of Action of the World Summit for Social Development[13] adopted by the World Summit for Social Development, and to further promote income-generation through agriculture to achieve this goal in accordance with SARD. Special emphasis should be given to those zones with high levels of poverty and high biodiversity.

(d) Financing for SARD

80. Domestic resources will continue to be the main source for financing SARD in many, but not all, countries. All Governments are urged to provide an enabling environment for mobilizing domestic resources and foreign direct investment.

81. The international community is urged to fulfil the commitments undertaken for the provision of financial assistance set out in Agenda 21, with a view to promoting SARD. Developing countries and their partners should make particular efforts to ensure that a larger share of ODA is directed to the agricultural sector, in accordance with national development strategies in recipient countries, given that ODA provided to this sector has been steadily declining during the past two decades.

82. The international community, including the United Nations system, is urged to provide support to institutional reform and development of market infrastructure for achieving SARD in developing countries and countries with economies in transition.

83. Governments and the international community, including the United Nations system, are urged to support developing countries in developing strategies and implementing measures to attract and to promote private capital flows and investment in sustainable agriculture directed to a wider range of developing countries, in particular the least developed countries, and countries with economies in transition, and to support the direction of a larger share of this capital to agriculture and rural areas.

(e) Technology transfer and capacity-building

84. Governments, relevant international organizations and the private sector are urged both to continue and to increase their contribution to capacity-building and facilitating an appropriate technology transfer to developing countries and countries with economies in transition, as well as to promote partnerships for fostering sustainable agriculture and food security and promoting rural development. There is a particular need for the dissemination of environmentally sound technologies held by international organizations.

85. International financial institutions are encouraged to further promote the transfer of technology and capacity-building, with emphasis on the allocation of funds to enable developing countries to achieve food security through enhanced agricultural production.

86. Relevant international, regional and national bodies and the private sector are encouraged to increase research in integrated natural resource management, appropriate technology and sustainable agricultural methods to achieve the objectives of food security and SARD, including participatory approaches, and to disseminate information on the results of their research and its applicability. Research should be carried out in a cooperative way involving both developed and developing countries.

87. Governments and the international community are encouraged to promote and share early warning systems and enhance national capacities to prevent and deal with natural disasters.

(f) Biotechnology

88. Governments are encouraged to cautiously explore the potential of appropriate and safe biotechnology for enhancing food security as well as sustainable agricultural techniques and practices, taking into account the need to enhance food security for all and SARD. This should be based on the precautionary approach, as articulated in principle 15 of the Rio Declaration on Environment and Development, and take into account concerns about possible adverse effects on the environment and human health.

89. Governments are urged to sign and subsequently ratify, as soon as possible, the Cartagena Protocol on Biosafety to the Convention on Biological Diversity and to support its effective implementation.

90. National Governments are encouraged to develop the appropriate legal frameworks and put into action appropriate strategies for sustainable agriculture, the protection of biodiversity, and the assessment of living modified organisms for deliberate release into the environment.

91. Governments and United Nations organizations are encouraged to promote only those applications of biotechnology that are ethically and environmentally acceptable and do not pose adverse effects on public health for agricultural-related research and production.

(g) Genetic resources

92. Governments are urged to strengthen their efforts for the sustainable use, conservation and protection of genetic resources. In this regard, Governments are urged to finalize the negotiations on the International Undertaking on Plant Genetic Resources for Food and Agriculture, as soon as possible, and to implement the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture[14] of the Leipzig Technical International Conference on Plant Genetic Resources, and to implement and actively contribute to the further development of the Global Strategy for the Management of Farm Animal Genetic Resources. Governments are further encouraged to strengthen their efforts in effectively implementing the Convention on Biological Diversity.

(h) Integrated pest management and sustainable plant nutrition

93. Governments are urged to eliminate the unsustainable use of plant protection products as well as fertilizers in agricultural production and to develop practical ways to enhance the application of integrated pest management and the sustainable use of fertilizers. All stakeholders, including farmers, the private sector and international organizations, are encouraged to work with Governments to form effective partnerships for this purpose.

94. In this regard, Governments are urged to finalize the negotiations on the international legally binding instrument for the implementation of international action on certain persistent organic pollutants (POPs) as soon as possible.

(i) Desertification and drought

95. Combating desertification and combating drought are crucial elements of SARD. Governments and relevant international organizations should promote the integration of national plans to combat desertification under the United Nations Convention to Combat Desertification into national strategies for sustainable development.

(j) Access to land and security of land tenure

96. Governments are encouraged to adopt policies and implement laws that guarantee well-defined and enforceable land property rights and improved access to land and security of tenure, in particular for disadvantaged groups, including people living in poverty, women, indigenous groups and the landless.

(k) Emergency preparedness

97. International agencies and other relevant organizations should assist Governments and regional entities in developing and building capacity for effective use of early warning and environmental monitoring systems. Efforts to improve resilience of both agricultural and social systems dealing with natural hazards are also encouraged.

3. International cooperation

(a) Agricultural trade

98. Governments are urged to work towards liberalization of trade in agricultural products, taking into account non-trade concerns, including food security and the need to protect the environment, as well as country-specific conditions, and to avoid unjustifiable trade distortions or trade barriers, in particular those that do not allow small-scale farmers access to industrialized country markets.

99. All relevant parties are encouraged to identify and pursue opportunities for trade liberalization in agricultural products, including addressing trade distorting subsidies and measures, which holds particular promise for promoting SARD.

100. Market access conditions for agricultural products of export interest to least developed countries should be improved, on as broad and liberal a basis as possible, and urgent consideration should be given to the proposal for a possible commitment by developed countries to granting duty-free and quota-free market

access for essentially all products originating in least developed countries, coupled with efforts of more advanced developing countries to improve market access for these countries.

101. The Commission on Sustainable Development stresses the need to implement the Marrakesh Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least Developed and Net-Food Importing Countries,[15] the comprehensive and integrated Plan of Action for the Least Developed Countries of the World Trade Organization and the joint commitment by the heads of the International Monetary Fund (IMF), the World Bank and the World Trade Organization to work together to assist developing countries in their adjustment process.

(b) Information exchange and dissemination

102. Governments and relevant international organizations are urged to disseminate widely, and to promote the access to farmers and those engaged in agriculture of, information on relevant sustainable agricultural practices, technologies and markets, *inter alia*, through capacity-building programmes, by utilizing information technology. In this context, special attention must be paid to the needs of women, marginalized groups and indigenous and local communities.

(c) United Nations and other international activities

103. FAO and other relevant international organizations are urged to assist countries in developing concrete policies, regulations and actions for the implementation of Agenda 21 concerning sustainable production and farming methods aimed at achieving the goals of the World Food Summit and of SARD.

104. FAO and other relevant international organizations are also urged to assist countries in developing policies aimed at providing food safety nets.

105. IFAD is encouraged to strengthen its assistance to rural communities in developing countries in support of their efforts to achieve SARD, primarily as a means to alleviate rural poverty.

106. FAO, UNEP, the Convention on Biological Diversity and other relevant organizations are encouraged to make further efforts in developing methodologies and improving coordination for data collection, analysis, monitoring and evaluation of public and private efforts to support sustainable agriculture.

107. Governments are urged to ratify the relevant international instruments, if they have not already done so, and to implement them in order to promote SARD.

108. The Consultative Group on International Agricultural Research (CGIAR) is invited to increase research in integrated natural resource management and to disseminate the results.

(d) Participation

109. Effective implementation of the SARD objectives requires participation of a wide range of stakeholders. Empowerment, participation and partnerships are critical to success in achieving SARD, in particular involvement of women, bearing in mind their important role in SARD. Governments and relevant international organizations are therefore urged, as appropriate, to further develop innovative institutional mechanisms to ensure effective stakeholder participation in decision-making related to SARD.

110. The United Nations Secretariat and FAO are invited, in consultation with major groups, Governments and other relevant organizations, to jointly facilitate the establishment of an ad hoc informal open-ended working group on SARD to further develop the specific outcomes of the eighth session of the Commission on Sustainable Development, with a view to preparing for the Commission's tenth session.

B. Co-Chairmen's summary of discussions

1. Introduction

111. As part of the multi-year work programme of the Commission on Sustainable Development adopted by the General Assembly in 1997 at its nineteenth special session, the eighth session of the Commission will consider the topic of agriculture as an economic sector. In this connection, the Commission's Inter-sessional Ad Hoc Working Group, meeting in New York from 28

February to 3 March 2000, reviewed progress achieved in the implementation of the objectives for "Promoting sustainable agriculture and rural development" as set out in chapter 14 of Agenda 21. It took into consideration the comprehensive review of the implementation of Agenda 21 undertaken in 1997.

112. The discussions of the Working Group were intended as inputs for the consideration of agriculture as an economic sector by the Commission on Sustainable Development at its eighth session, to be held from 24 April to 5 May 2000.

113. The Working Group's discussion of the issue was based upon the report of the Secretary-General entitled "Sustainable agriculture and rural development" and its addenda (E/CN.17/2000/7 and Add.1 and 2).

114. The Working Group examined the extent to which SARD policies, strategies and programmes — as outlined in chapter 14 of Agenda 21 — had been implemented and how this progress had helped to promote agriculture as an economic vehicle for attaining the major objectives of SARD and the World Food Summit Plan of Action in the post-United Nations Conference on Environment and Development period. Economic, social and environmental dimensions of SARD were considered.

115. A number of delegations described their national efforts to attain food security for their populations and their efforts to reduce the number of undernourished people. Agriculture sector policy reforms were meant to provide a stable legislative framework and to guarantee ownership of, and access to, productive resources, especially on land; improve the functioning of markets, *inter alia*, for labour and credit; and sanction property rights and create risk-reduction, among others things.

116. The multifunctional aspects of agriculture, as described in chapter 14 of Agenda 21, and in the World Food Summit Plan of Action, were emphasized by some delegations, while some underlined that consensus on the concept had not been achieved.

2. Food security and poverty alleviation

117. On the basis of current trends, the target established by the World Food Summit of halving the number of undernourished people by 2015 would not be reached. Achieving food security is a global policy objective of the highest priority. The developed countries and the international community should continue supporting food aid. Food-importing countries, when formulating strategies for food security, need to pay careful attention to vulnerabilities in their food supply and to introduce concrete complementary measures such as enhancement of domestic food production, combined with improved food-storage systems.

118. A direct consequence of slow progress in achieving SARD is the persistent increase in the level of poverty in developing countries. This has contributed to widening the gap between rich and poor, and has led to the marginalization of the poor in general and women in particular.

3. Agricultural trade

119. Trade liberalization can have both positive and negative impacts on agriculture and rural development. Trade policies should be geared towards the elimination of environmentally harmful subsidies and any other trade distorting policies, which constitute obstacles to market access for goods, including possible environmental barriers to trade.

120. Trade liberalization can stimulate more efficient use of natural resources and have positive impacts on poverty eradication and the environment, provided that mutually supportive social and environmental measures are adopted. A more open multilateral trading system, consistent with sustainable development, and the elimination of protectionist practices are desirable.

121. A large number of small-scale subsistence farmers in developing countries produce for consumption, do not participate in the market and are left behind by globalization. In addressing issues of sustainability and liberalization of trade in the agriculture sector, a balanced approach is needed, bearing in mind the consensus reached in the series of global conferences.

122. Because the internal market is no longer protected in countries with economies in transition, exporters from other countries with government support are now gaining a greater share in the local market for food.

4. Sustainable production systems

123. Terrestrial ecosystems and land productivity are being threatened by unsustainable practices in

agriculture, grazing and forestry. Many problems of land degradation cannot be effectively addressed without the reduction and eradication of poverty and hunger. Soil protection measures are important for increasing food production, ensuring food security and protecting biological diversity. Identification of critical areas of actual and potential land degradation is important for determining priorities for land conservation efforts and for protecting water resources and biodiversity. Good agricultural practices can be part of the solution to environmental degradation.

124. Urban and peri-urban agriculture could improve rural/urban linkages, and rural development could make an important contribution to food security and nutritional status.

125. Regarding the relationship between biodiversity and agriculture, action is needed to mitigate the negative impacts from the expansion of agricultural land and livestock grazing on natural ecosystems, resulting in deforestation and the loss of biodiversity. National and regional strategies and policies should be introduced to reverse these trends and to reclaim and rehabilitate degraded land and protect biodiversity.

126. An ecosystem approach to SARD has been adopted in some countries. This approach views all human activities in the context of the social, economic and ecological environment in which they take place.

127. Unsustainable input use in agricultural production needs to be eliminated, especially the use of chemicals that result in an increase in water and soil pollution. Practical ways need to be developed to enhance the application of integrated pest management and the sustainable use of fertilizers.

128. It is clearly impossible to resolve issues of agriculture and rural development without dealing in a substantial way with the issue of water. In this regard, the reports emanating from Economic and Social Council resolutions 1999/47, 1999/48 and 1999/49 will be before the Commission on Sustainable Development at its April 2000 session.

129. While organic farming had been promoted and used in a number of countries, some countries were cautious on this issue. They felt that there could be limitations and risks in the organic production of food in developing countries, and that this approach should not be considered a solution for developing-country needs. The use of organic agriculture as a basis for setting standards that could lead to trade barriers should be avoided. Nonetheless there are a number of organic agricultural techniques that could be applied to enhance traditional and other agricultural practices to promote SARD. The international community should assist developing countries in using and taking advantage of these techniques.

130. One of the challenges for SARD is the rehabilitation of agricultural and range lands by harmonizing environmental and agricultural policies. Another challenge is the conservation of farm land and reclamation of degraded land by establishing agricultural projects to meet basic food needs and create job opportunities.

5. Biotechnology and biosafety

131. Research has an important role to play in agricultural innovation, and biotechnology could contribute to a great extent to food security. In order to ensure that the use of biotechnology does not threaten the conservation or sustainable use of biodiversity, the precautionary approach, as articulated in principle 15 of the Rio Declaration on Environment and Development, should apply. The use of biotechnology should be introduced in such a manner as to ensure that traditional farming practices are respected, equitable access to farm inputs is ensured, the rights of indigenous people and local communities are respected and consumer concerns are met.

132. Governments should encourage investment in research in the public domain for development of affordable technology so as to enhance agricultural productivity. The Cartagena Protocol on Biosafety to the Convention on Biological Diversity is an important instrument in the research, development and application of biotechnology. It was felt that, because existing plant-transformation technologies were governed by stringent intellectual property rights norms, access to these technologies and databases was too costly to developing countries. There is a need to recognize the issue of facilitated access to plant genetic resources and technology.

133. Genetic approaches, including biotechnology, could be a major avenue towards achieving increased agricultural productivity. The environmental impact of the use of genetically modified organisms for food and agriculture must be subjected to proved tests before their introduction into the international market.

134. The Cartagena Protocol on Biosafety should be implemented. Appropriate strategies for sustainable agriculture, for the protection of biodiversity and for the assessment of genetically modified organisms should be developed in line with the Protocol. Ways and means to address consumers' concerns about genetically modified organisms should be examined. Cooperation within the international community is key in the transfer of technology and exchange of information for a better understanding of the harmful effects of genetically modified food products.

6. Participation and empowerment

135. Empowerment, participation and partnerships are critical to success in achieving SARD.

136. Community-based approaches to SARD and natural resource management — where all key stakeholders, including local communities, women and indigenous people, play a part and accept an appropriate level of responsibility for managing resources and implementing appropriate solutions — are crucial. Farmer participation is also critical in agricultural research and extension endeavours. Traditional and local knowledge should be recognized and protected.

137. Security of land tenure provides confidence for investment and management change. A legal framework and institutions are needed to ensure secure, equitable and transparent land tenure and access to land, paying particular attention to gender aspects and the rights of indigenous and local communities.

7. International cooperation

138. Many countries felt that the United Nations Convention to Combat Desertification, which aims at redressing land degradation in developing countries, should receive adequate support, including financial support, as one of the key instruments that would assist in the implementation of SARD.

139. Other international instruments, including the Convention on Biological Diversity, and the United Nations Framework Convention on Climate Change and its Kyoto Protocol, provide a framework for international cooperation in SARD. Some delegations felt that the mechanisms related to these Conventions should be used to enhance the resource and financial flows to SARD.

140. ODA has not reached the level agreed in Agenda 21. It has been consistently declining over the last 20 years, and ODA to agriculture has decreased by 50 per cent in the last 10 years. Foreign direct investment (FDI) has increased, but it has been highly uneven and mainly directed outside the agriculture sector. FDI should be used as a complementary investment to domestic resources and ODA in promoting SARD.

141. International financial institutions should become involved in transfer of technology, with emphasis on allocation of funds to agricultural production and food security. International organizations should encourage developing countries in their efforts to achieve their own food security.

142. United Nations agencies, programmes and funds should provide support to implement Agenda 21 and to achieve the targets of the World Food Summit. It was noted, however, that food aid could have a negative impact on SARD and on small-scale farmers.

143. International agencies, including financial agencies, the private sector and other relevant organizations should assist Governments and regional entities in developing and building capacity for effective use of early warning and environmental monitoring systems. Efforts to improve resilience of both agricultural and social systems in the face of natural hazards are also encouraged.

144. Donor coordination and innovative partnerships, including public-private partnerships, are important for achieving greater investment in agriculture and the rural sector.

145. To ensure food security in a sustainable manner, new environmentally sound technologies, such as integrated pest management and integrated plant nutrition systems, should be adopted and adapted to local conditions. The transfer of such technologies should be promoted to assist developing countries in coping with their challenges.

146. International agencies should assist Governments in promoting sustainable agricultural research and extension services, and in undertaking training programmes for farmers and agro-food industries.

147. Effective international partnerships must be established, when appropriate, among governmental, non-governmental and private sector agencies to transfer and adapt a broad range of knowledge,

techniques and experience related to sustainable agricultural development.

148. Action is needed on transfer of technology, capacity-building and implementation of commitments of Agenda 21 and other agreements.

149. The widespread dissemination of technological information and innovative institutional practices to all stakeholders is required to enhance the ability of developing countries to introduce sustainable agricultural practices.

150. Information technologies, including Internet access, GIS, remote sensing and GPS offer valuable technologies for SARD.

III. Other matters

151. No matters were discussed by the Working Group under this agenda item.

IV. Adoption of the report of the Working Group

152. At its 6th meeting, on 3 March 2000, the Working Group had before it its draft report (E/CN.17/ISWG.I/2000/L.1) as well as informal papers.

153. At the same meeting, the Working Group took note of the informal papers and adopted its report.

V. Organizational and other matters

A. Opening and duration of the session

154. The Inter-sessional Ad Hoc Working Group on Integrated Planning and Management of Land Resources, and Agriculture, of the Commission on Sustainable Development, met in New York from 28 February to 3 March 2000, in accordance with Economic and Social Council decision 1999/280 of 29 July 1999. The Working Group held 6 meetings (1st to 6th meetings).

155. The session was opened by the Co-Chairman of the Commission on Sustainable Development, Choi Seok-young (Republic of Korea).

156. The Director of the Division for Sustainable Development of the United Nations Secretariat made an introductory statement.

157. The Chairman of the inter-sessional event "Cultivating Our Future" made a presentation.

158. The following made presentations on the Multi-stakeholder Dialogue on Sustainable Agriculture: Leah Porter (business and industry); David King, International Federation of Agricultural Producers (farmers); Lucien Royer, Trade Union Advisory Council/Organisation for Economic Cooperation and Development (trade unions); Carol Kalafatic, indigenous people's representative on the NGO Sustainable Agriculture and Food Systems Caucus (non-governmental organization); and Gordon Bispham, Southern Co-Chair of the NGO Sustainable Agriculture and Food Systems Caucus.

B. Election of officers

159. At its 1st meeting, on 28 February, the Working Group elected Patrick McDonnell (Ireland) and Modesto Francisco Fernández Díaz-Silveira (Cuba) as Co-Chairmen, by acclamation.

C. Agenda and organization of work

160. At its 1st meeting, on 28 February, the Working Group adopted its provisional agenda contained in document E/CN.17/ISWG.I/2000/1 and Corr.1, and approved its organization of work. The agenda was as follows:

1. Election of officers.
2. Adoption of the agenda and other organizational matters.
3. Integrated planning and management of land resources; and agriculture.
4. Other matters.
5. Adoption of the report of the Working Group.

D. Attendance

161. The session was attended by representatives of 35 States members of the Commission on Sustainable

Development. Observers for other States Members of the United Nations and for the European Community, and representatives of organizations of the United Nations system and secretariats of treaty bodies, as well as observers for intergovernmental and non-governmental organizations, also attended. The list of participants is given in the annex to this report.

E. Documentation

162. The Working Group had before it the following documents:

(a) Report of the Secretary-General on integrated planning and management of land resources (E/CN.17/2000/6);

(b) Report of the Secretary-General on integrated planning and management of land resources: conservation of biological diversity (E/CN.17/2000/6/Add.4);

(c) Report of the Secretary-General on sustainable agriculture and rural development (E/CN.17/2000/7);

(d) Report of the Secretary-General on sustainable agriculture and rural development: urbanization and sustainable agricultural development (E/CN.17/2000/7/Add.1);

(e) Report of the Secretary-General on sustainable agriculture and rural development: biotechnology for sustainable agriculture (E/CN.17/2000/7/Add.2);

(f) Letter dated 1 February 2000 from the Permanent Representative of the Netherlands to the United Nations addressed to the Secretary-General, transmitting the Chairman's report on the "Cultivating Our Future" conference on the multifunctional character of agriculture and land (Maastricht, Netherlands, September 1999) (E/CN.17/ISWG.1/2000/2).

Notes

[1] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] General Assembly resolution S-19/2, annex.

[3] See United Nations Environment programme, *Convention on Biological Diversity* (Environmental Law and Institution Programme Activity Centre), June 1992.

[4] *Report of the United Nations Conference on Human Settlements (Habitat II), Istanbul, 3-14 June 1996* (United Nations publication, Sales No. E.97.IV.6), chap. I, resolution 1, annex II.

[5] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex I.

[6] Ibid., annex III.

[7] FCCC/CP/1997/7/Add.1, decision 1/CP.3, annex.

[8] A/AC.237/18 (Part II)/Add.1 and Corr.1, annex I.

[9] General Assembly resolution S-19/2, annex, sect. IV.C and D, and appendix.

[10] See *Report of the World Food Summit, 13-17 November 1996, part one* (Rome, FAO, 1997) (WFS 96/REP), appendix.

[11] Ibid.

[12] *Report of the World Summit for Social Development, Copenhagen, 6-12 March 1995* (United Nations publication, Sales No. E.96.IV.8), chap. I, resolution 1, annex I.

[13] Ibid., annex II.

[14] *Report of the International Technical Conference on Plant Genetic Resources, Leipzig, Germany, 17-23 June 1996* (ITCPGR/96.REP), annex 2.

[15] See *Legal Instruments Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, done at Marrakesh on 15 April 1994* (GATT secretariat publication, Sales No. GATT/1994-7).

Annex

Attendance

Members of the Commission on Sustainable Development

Algeria:	Abdallah Baali, Abderrahmane Merouane
Angola:	
Belgium:	André Adam, Dirk Wouters, Jan Verschooten, Gunther Sleeuwagen, Chris Van den Bilcke, Rene Poismans, Ulrich Lenaerts, Jean-Paul Charlier
Brazil:	Maria Luiza Ribeiro Viotti, Barbara Briglia Tavora, Antonio Ricardo Fernandes Cavalcante, Alexandre Kotzias Peixoto, Audo Araujo Faleiro
Bulgaria:	Vladimir Sotirov, Zvetolyuv Basmajiev
Cameroon:	
Canada:	Yvan Jobin, Kim Girtel, Craig Wilson, Tim Marta, Jacques Forget, Andrew Kenyon, Iain MacGillivray, Rasheda Nawaz, Sharon Lee Smith, Raina Ho, Janet Stephenson
China:	Zhang Xiaoan, Shi Weiqiang, Xie Junqi, Sun Zhen, Bai Youngjie, Ni Hongxing
Colombia:	Juan Mayr Maldonado, Alfonso Valdivieso, Fabio Ocaziones, Mauricio Baquero, Adriana Soto
Côte d'Ivoire:	
Cuba:	Bruno Rodriguez Parrilla, Rafael Dausa Cespedes, Modesto Fernandez Diaz-Silveira, Ileana Nuñez Mordoche, Alfredo Curbelo
Czech Republic:	Jan Kára, Martin Fantyš, Petr Pafizek
Democratic People's Republic of Korea:	Kim Chang Guk, Mun Jong Chol
Democratic Republic of the Congo:	
Denmark:	Torben Mailand Christensen, Jørgen Hartnack, Peter Gebert, Annette Samuelsen, Lisse Søe Naldal
Djibouti:	
Egypt:	Ahmed Aboul Gheit, Ahmed Darwish, Ahmed Khorched, Hazem Fahmy, Ihab Gamaleldin, Riad El-Badawy, Ahmed Fadel Bedewi, Hassan Wahbi Morsi, Heba Fikry Basseli

France:	Alain Dejammet, Raymond Quereilhac, Genevieve Verbrugge, Souad Le Gall, Paul Luu, Daniel Le Gargasson
Germany:	Martin Lutz, Stephan Contius, Reinhard Krapp, Joachim Woiwode, Karl-Heinz Wittek, Cornelia Berns, Barbara Schäfer, Peter Christmann, Raphael Breidenback, Astrid Thyssen
Guyana:	Samuel R. Insanally, Alison Drayton, George Wilfred Talbot
Hungary:	Sándor Mózes
India:	
Indonesia:	Makarim Wibisono, Makmur Widodo, Djauhari Oratmangun, Ngurah Swajaya
Iran (Islamic Republic of):	Bagher Asadi, Mehdi Mirafzal, Mohsen Esperi
Ireland:	Martin Farrell, Patrick McDonnell, Dympna Hayes
Italy:	Sergio Vento, Valerio Astraldi, Corrado Clini, Davide Morante, Giovanni Brauzzi, Valeria Rizzo, Paolo Soprano, Fabio Cassese, Antonio Strambacci, Ines Zezza, Giovannino Di Palma, Andrea Camponogara, Walter Gallinetta, Umberto Binatti
Japan:	Yuji Kumamaru, Koichiro Seki, Mitsuo Usuki, Masatoshi Sato, Atsuhiro Meno, Shunichi Nakada, Yasuyuki Inoue, Yutaka Nakao, Yuji Yamamoto, Toru Nagayama, Norimasa Shimomura
Kazakhstan:	
Lebanon:	
Mauritania:	
Mauritius:	Anand Priyay Neewoor, Premsagar Bholah
Mexico:	Manuel Tello, Carlos Toledo, Patricia Arendar, Bertha Helena de Buen, Araceli Vargas-Mena, Maria del Carmen Rojas, Arturo Ponce
Mozambique:	
Netherlands:	Pieter Verbeek, Frits Thissen, Vincent van Bergen, Ko van Doorn, Ton Waarts, Herman Verhey, Jeroen Steeghs, Jacqueline Broerse, Kirsten Kuipers, Marja Cochius, Alexandra Valkenburg, Hans Alders, J. F. de Leeuw, Hans Hoogeveen, J. Smids-Goossens
New Zealand:	
Nicaragua:	
Niger:	

Panama:	
Paraguay:	
Peru:	Manuel Picasso, Rubén Espinoza, Eduardo Perez del Solar
Philippines:	Libran N. Cabactulan, Miguel Bautista, Glenn F. Corpin
Portugal:	António Monteiro, Júlio Mascarenhas, Nuno Brito, Helena Martins, João Fins-do-Lago, Isabel Mertens, Antonio Botão, Nadia Pires, José Manuel Bual, Nair Alves, Carlos Pais, Rosa Caetano, Maria de Lurdes Caiado
Republic of Korea:	Suh Dae-won, Choi, Seok-Young, Yoon, Jong Soo, Shin Won-woo, Kim Chan-Woo, Oh Youngju, Lee Sang-jae, Jeong Young-Dae, Shin Chang-hyun, Kwak Il-Chyun
Russian Federation:	Vassili A. Nebenzia, Aleksandr A. Pankin, Dmitry I. Maksimychev, Sergey F. Bulgachenko, Sergey O. Fedorov
Slovakia:	Igor Vencel
Spain:	Inocencio F. Arias, Juan Luis Flores, Francisco Rabena, Luis Esteruelas, Adrian Vecino, Silvia Cortes
Sri Lanka:	S. L. Weerasena
Sudan:	Elfatih Mohamed Erwa, Mubarak Rahmtalla, Daffa-Alla AlHag Ali Osman, Omer Dahab Fadol Mohamed, Tarig Ali Bakhit
The former Yugoslav Republic of Macedonia:	Naste Čalovski, Vasko Grkov, Donka Gligorova, Goran Stevčevski
Tunisia:	
United Kingdom of Great Britain and Northern Ireland:	
United States of America:	Mark G. Hambley, Adela Backiel, David Hales, Jennifer Bergeron, Christine Bergmark, Thomas Brennan, Ann Carey, James Colby, Wayne Denney, Michael Gallagher, Melissa Kehoe, John Lewis, Daniel Magraw, Jonathan Margolis, Franklin Moore, Christopher Muller, Lynette J. Poulton, David Shark, Kenneth Thomas, David van Hoogstraten, Kathryn Washburn, Norine Kennedy, Thomas Rogers
Venezuela:	

States Members of the United Nations represented by observers

Azerbaijan, Austria, Barbados, Belarus, Croatia, Finland, Gambia, Greece, Guatemala, Israel, Jordan, Kenya, Lithuania, Nigeria, Norway, Pakistan, Poland, Romania, Samoa, Saudi Arabia, South Africa, Sweden, Thailand, Trinidad and Tobago

Entities represented by observers

European Community

Non-member States maintaining permanent observer missions at Headquarters

Switzerland

Specialized agencies and related organizations

International Labour Organization, Food and Agriculture Organization of the United Nations, United Nations Educational, Scientific and Cultural Organization, International Fund for Agricultural Development, United Nations Industrial Development Organization, World Trade Organization

Intergovernmental organizations

Commonwealth Secretariat

Secretariats of treaty bodies

Convention on Biological Diversity

United Nations and related programmes

Economic and Social Commission for Asia and the Pacific, Economic Commission for Latin America and the Caribbean, Economic and Social Commission for Western Asia, United Nations Development Programme, United Nations Environment Programme

Non-governmental organizations

International Chamber of Commerce, International Council for Local Environmental Initiatives, The Popular Coalition to Eradicate Hunger and Poverty, The Women's Caucus, Third World Network

United Nations E/CN.17/2000/12

Economic and Social Council

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Commission on Sustainable Development
Eighth session
24 April-5 May 2000
Item 8 of the provisional agenda*
Other matters

Report of the Ad Hoc Open-Ended Intergovernmental Group of Experts on Energy and Sustainable Development

(New York, 6-10 March 2000)

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I. Matters calling for action by the Commission on Sustainable Development or brought to its attention

Draft decision

1. The Ad Hoc Open-Ended Intergovernmental Group of Experts on Energy and Sustainable Development recommends to the Commission on Sustainable Development at its eighth session, the adoption of the following draft decision:

Agenda for the second session of the Ad Hoc Open-Ended Intergovernmental Group of Experts on Energy and Sustainable Development

The Commission on Sustainable Development endorses the agenda for the second session of the Ad Hoc Open-Ended Intergovernmental Group of Experts on Energy and Sustainable Development as adopted by the Group at its first session as follows:

Provisional agenda

1. Adoption of the agenda and other organizational matters.
2. Consideration of the key issues of energy for sustainable development, with due consideration given for each issue to the means of implementation: capacity-building, technology transfer and financial resources:
   (a) Accessibility of energy;
   (b) Energy efficiency;
   (c) Renewable energy;
   (d) Advanced fossil fuel technologies;
   (e) Nuclear energy technologies;
   (f) Rural energy;
   (g) Energy-related issues in transportation.
3. Regional initiatives and endeavours.
4. Learning from each other: success stories in the promotion of energy for sustainable development.
5. Enhancing international cooperation for energy for sustainable development.
6. Adoption of the report.

II. Preparations for the ninth session of the Commission on Sustainable Development, on energy issues

2. The Expert Group considered agenda item 3 at its 1st to 5th and 7th meetings, on 6 to 8 and 10 March 2000.

3. At its 1st meeting, on 6 March, the Director of the Division for Sustainable Development made an introductory statement.

4. At the same meeting, the Chairman of the World Energy Assessment Editorial Board made a presentation on the results of the World Energy Assessment.

A. Co-Chairpersons' summary of the discussion

1. Introduction

5. At its nineteenth special session, the General Assembly adopted the Programme for the Further Implementation of Agenda 21 (General Assembly resolution S-19/2, annex), which included the multi-year programme of work for the Commission on Sustainable Development for the period 1998-2001, under which the sectoral theme of the ninth session of the Commission will be atmosphere/energy and the economic sector to be discussed will be energy/transport. Pertinent decisions of the General Assembly are contained in the section entitled "Energy" of the Programme for the Further Implementation of Agenda 21, as well as in the relevant sections on transport and atmosphere (paras. 42-56).

6. At its nineteenth special session, the General Assembly, recognizing the complexities and interdependencies inherent in addressing energy issues within the context of sustainable development, also decided that the preparations for the ninth session of the Commission should be initiated at the Commission's seventh session and should utilize an open-ended intergovernmental group of experts on

energy and sustainable development to be held in conjunction with inter-sessional meetings of the eighth (2000) and ninth (2001) sessions of the Commission. The General Assembly emphasized that, in line with the objectives of Agenda 21, the ninth session of the Commission should contribute to a sustainable energy future for all.

7. The Ad Hoc Open-Ended Intergovernmental Group of Experts on Energy and Sustainable Development met for its first session from 6 to 10 March 2000, at New York. At this session, the Group of Experts deliberated on the preparations for the ninth session of the Commission, on energy issues, which involved identifying key issues of energy and sustainable development, discussion of the programme of work between the first and second sessions of the Group of Experts and the formulation of a provisional agenda for its second session.

8. The participants at the meeting benefited from a combined panel on global energy trends and sustainable development, financing, investment and sustainable energy, involving representatives from the Organization of Petroleum Exporting Countries (OPEC), the International Energy Agency (IEA), the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF).

9. Preparations for the ninth session of the Commission should build on Agenda 21, taking into account the principle of common but differentiated responsibilities and the Programme for the Further Implementation of Agenda 21. The preparatory process could also take into account the existing international documents which address energy issues, such as the Programme of Action for the Sustainable Development of Small Island Developing States, the outcome of the twenty-second special session of the General Assembly and the World Solar Programme, and energy-related provisions of the outcomes of other relevant global conferences, summits and conventions.

10. At the same time it was recognized that the work of the Group of Experts could benefit from exchange of information with other ongoing intergovernmental processes relevant to energy and sustainable development. The need for active exchange of information between the Group of Experts and such processes in the lead up to the ninth session of the Commission was fully recognized.

11. In reviewing the theme of energy and sustainable development, taking into account the special circumstances of developing countries and bearing in mind Agenda 21 and the outcome of the nineteenth special session of the General Assembly, consideration was given to the implementation of their provisions relating to financial resources, transfer of technology, capacity-building and foreign investment flows to developing countries, and to the importance of national policies.

12. The Group of Experts emphasized the expert nature of its work and the overall objective of its mandate. It was also noted that this preparatory process would provide information for decision makers for their consideration in policy development on energy. The importance of a multi-stakeholder approach in the deliberations of the Group of Experts has also been underlined.

2. Key issues for consideration at the ninth session of the Commission on Sustainable Development

13. During the deliberations at the first session of the Group of Experts, based on the report of the Secretary-General entitled "Energy and sustainable development: key issues" (E/CN.17/ESD/2000/3), as well as the introduction of the draft world energy assessment report and panel presentations, the key issues described below were identified as of particular importance to the participants. Consideration of these issues would require technical work during this preparatory process leading to the ninth session of the Commission, which should promote a common understanding of the challenges and constraints inherent in the concept of energy for sustainable development. Progress in the achievement of energy in support of sustainable development will depend on the socio-economic conditions, the stage of development in different countries and the political will to effect change. These key issues represent areas where the international community can promote movement towards energy systems in support of sustainable development.

14. A major challenge for the international community is to ensure that energy systems will contribute to the goals of sustainable development.

Accessibility of energy

15. Access to energy is crucial to the achievement of economic and social development and the alleviation of

poverty, as well as to addressing environmental concerns. There is a need for energy services to be delivered reliably, affordably, economically and in an environmentally sound and socially acceptable manner, particularly in developing countries, including their rural areas, in order to meet their energy requirements. Diversification of energy sources with enhanced use of locally available energy resources is important.

16. Accessibility of energy depends on security of supply and security of demand of energy, which contribute to market stability. This can be enhanced through, for example, the ongoing international dialogue between producers and consumers of energy, information exchange and enhanced transparency, as well as analysis and projections of future demand and supply of energy. Despite the introduction of new forms of energy, fuelwood continues to play an important role in satisfying energy needs in many rural areas. Access to sustainable fuelwood supplies is a growing problem in many developing countries, and it needs to be addressed in a comprehensive manner.

17. Electricity is increasingly assuming greater importance in the total energy mix, particularly in developing countries, with increasing recognition of adequate and reliable electric power as important to economic and social development. Therefore, low-cost financing schemes may be needed. The electric power sector of developing countries faces a formidable array of new challenges. There are very strong social imperatives and political pressures to expand supply since large segments of the population are still without adequate access to energy, including commercial energy, such as electricity. Electrification is capital-intensive and still perceived as being a major challenge for developing countries; it could benefit from the liberalization of electric power markets. The electrification of rural areas, the maintenance and modernization of existing grids, and the establishment of decentralized and stand-alone energy systems and enhanced efficiency in distribution will need international support. Environmentally sound and economically advantageous solar, wind, biomass and ocean-based technologies should similarly be promoted.

18. Investments in cross-border electricity and oil and gas infrastructure can often be facilitated by cooperation on framework conditions among concerned countries, including transit countries.

19. The transportation of energy products through natural gas and oil pipelines and shipment by tankers should take fully into account environmental and economic cost-effectiveness concerns. The consideration of diversification of energy transportation routes provides an opportunity for international cooperation.

Energy efficiency

20. There is a need to increase the efficiency of current conventional energy production, conversion, transportation, distribution and use. Large gains in efficiency can still be achieved in all types of energy technology and in all economic sectors; major gains can still be achieved in industrialized countries. Further consideration should be given to energy policies that lead to accelerated development and the adaptation of more energy-efficient technologies, which can reduce the growth of energy use. Investment in energy and material efficiency would result in significant energy savings and could release additional investment resources for financing energy systems in support of sustainable development. The identification and removal of obstacles to technology transfer is vital and instrumental in enabling developing countries achieve higher energy efficiency. It is also important to establish national institutional and legal frameworks to promote the efficient use of energy.

21. The need for close attention to long-term development planning was noted since energy balance is largely determined by long-lived infrastructure of the major energy-consuming sectors, such as transportation, urban layouts, building and industrial plans.

22. Energy conservation by both energy producers and consumers and loss reduction in various energy-use sectors are equally important. Opportunities for energy efficiency are generally cost-effective and should be actively pursued.

23. Energy efficiency improvements in industrialized countries may not be automatically applicable in developing countries because of the existing infrastructure and level of technology development. International cooperation could focus on technology adaptation to suit local conditions. Public awareness campaigns could contribute to greater understanding of the advantages of energy and material efficiency and

lead to wider acceptance of energy efficiency standards.

Renewable energy

24. An increasing role for renewable energy, with due consideration to cost-effectiveness, is considered important to achieve the objectives of an energy future in support of sustainable development. In developing countries, the realization of this role will have to be associated with transfer of technology, technology availability and capacity-building. The share of renewable energy sources in the global energy mix should be increased. Many renewable energy technologies have enormous potential. Considerable research and development has already been undertaken; however, realizing the potential of these technologies will require further research and development activities along with market expansion in order to reduce their costs. Many successful cases exist, especially in remote areas, where renewable sources of energy are used under normal market conditions. Further efforts at the local, national, regional and international levels need to be undertaken to obtain quantitative and qualitative information on the availability of renewable sources of energy by improving the availability of data.

25. Although investment initiatives in renewable energy technologies and their efficient use might require the promotion of attractive fiscal incentives and national legal frameworks, concern was expressed on this matter. In many cases, such investments will require bilateral and multilateral assistance due to perceived higher economic risk by the private sector.

26. Greater understanding and analysis of market conditions, including regional markets, is needed for wider application of these technologies to enhance their contribution to sustainable development. A key element in promoting the acceptance and use of renewable energy sources and technologies lies in heightened public awareness. Constraints in renewable energy application in developing countries include their high capital cost, limited research and development and technology capabilities and resources, lack of institutional capacity, and lack of financial and human resources.

Advanced fossil fuel technologies

27. Since most global energy needs today are provided by fossil fuels and it is expected that these fuels will continue to play a major role in the foreseeable future, there is a need for the promotion, research, development and use of advanced and cleaner fossil fuel technologies. The international community should cooperate in the dissemination and transfer of such advanced technologies, their operation and the financing of their use.

Nuclear energy technologies

28. nuclear energy will continue to contribute to the overall energy mix. It is necessary, however, that acceptable responses be found to such concerns as reactor safety, radioactive waste management, proliferation of fissile material and life cycle cost.

Rural energy

29. Issues confronting rural energy are wide-ranging. The provision of affordable energy services to areas beyond economic reach of energy supply grids, which are designed to truly meet local needs, such as water supplies, presents a major challenge. Policies aimed at providing modern energy services to rural areas should also take into careful consideration the generation of concomitant income-generating activities. This also requires the delivery of energy services for productive activities as well as maintenance of rural energy systems. Rural energy systems should be simple and decentralized in terms of their design, construction, operation and maintenance, and make the best use of indigenous resources with widest local community participation in order to ensure the sense of ownership needed to maintain these energy systems.

30. Financing mechanisms for rural energy services should be designed to maximize local ownership, by extending credit at low cost — to the local community and by introducing other innovative financial mechanisms. This will require domestic resources and both national and international cooperative efforts to mobilize additional resources for this purpose.

31. Energy supplies and technologies utilized for cooking require special attention. There are social and economic benefits to be gained by enabling women in rural areas to become the beneficiaries of environmentally sound energy technologies, know-how and extension services. Particular benefits could result from outreach programmes in the areas of education, training and microcredit facilities, in particular targeted to women, and related to community development

programmes on household use of fuelwood, modern fuels and energy efficient cooking technology.

Energy and transportation

32. Transportation is the fastest growing energy-consuming sector. The global consumption of transportation fuels together with concerns about the environmental and health impacts of combustion emissions have stimulated research and development into cleaner fuels and new transportation technologies. Potential also exists in using alternative fuels and additives, such as compressed natural gas, liquefied petroleum gas, methanol, ethanol and bio-diesel.

33. There are a number of possible policies to encourage faster uptake of alternative fuels and reducing the negative environmental impacts of transportation, such as measures to encourage change of transportation modes, measures to raise energy efficiency within each transportation mode, measures to develop and promote public transportation, measures to promote alternative fuels, and measures for emission control and effective enforcement procedures. Initiatives should build on existing industrial and manufacturing agreements, which establish guidelines for improved product efficiency.

Technology transfer

34. There is a need to intensify international cooperation in transfer of energy technologies through North-South and South-South cooperation in order to achieve energy for sustainable development solutions. There is a need to remove constraints and barriers to the effective transfer of such technologies. Consideration should be given to international cooperation that encourages local development, adaptation, operation and maintenance of environmentally sound technologies, as well as support for capacity-building in order to locally produce the necessary equipment needed to ensure sustainable energy supply in developing countries.

35. Efforts to enhance scientific and technology cooperation through the research, development, transfer and diffusion of environmentally sound technologies should recognize the important but differentiated contributions of the public and private sectors. There is also a need for further efforts in the commercialization and marketing of new and cleaner technologies. The governmental role in developing and fostering enabling policy, legal and institutional frameworks should be emphasized.

36. The participation of local communities, the private sector and other stakeholders as well as public-private partnerships in cleaner and advanced energy technology development could facilitate efficient transfer, adaptation and use of technologies and know-how.

Capacity-building

37. Capacity-building efforts need special attention in international cooperation activities. Capacity-building is an essential component of strategies aimed at achieving the objectives of energy for sustainable development. This includes the building of institutional, managerial and technical capacities. There is a need to strengthen national capacity, including through enhancement of existing networks at the subregional, regional and international levels, with international support and cooperation, including the facilitation of joint research programmes.

38. The educational and awareness levels of end-users should be raised in order to promote the acceptability of many environmentally sound energy technologies.

39. The need to support increased participation of civil society in national and international policy and project development through the rule of law and democratic, participatory and transparent decision-making was expressed.

Mobilization of financial resources

40. Substantial new and additional financial resources would continue to be required to support developing countries' efforts to move towards energy that contributes to sustainable development. Bilateral and multilateral official development assistance (ODA) is an important source of external funding for energy for sustainable development in developing countries, and United Nations Conference on Environment and Development (UNCED) commitments were recalled. There is also a need to mobilize financial resources and to enhance the effectiveness of existing financial resources. In order to achieve this, consideration needs to be given to the design of appropriate arrangements for reducing investment risk and attracting capital. In addition, attention is needed to develop innovative mechanisms to increase the magnitude of investments

in the application of energy technologies for sustainable development, especially energy efficiency, cleaner fuels and renewable energy technologies. The importance of mobilization and better use of domestic financial resources for energy for sustainable development was stressed.

41. Multilateral financial institutions and programmes should strengthen their financial assistance, particularly grants and concessional mechanisms, in order to contribute to growth in the development and application of energy technologies for sustainable development in close consultation with recipient countries. In addition, they can play an important complementary and catalytic role in encouraging private investment and, where appropriate, all aspects of country-driven capacity-building and strengthening.

42. Establishing an enabling environment to attract private investment and public-private partnerships will require macroeconomic stability, trade liberalization and transparent and sound investment policies, as well as well-functioning regulatory frameworks and legal and financial systems. Privatization and liberalization, including the gradual removal of harmful subsidies, is essential to stimulate increased private investment and competition in the energy sector to bring about more efficiency in the sector, reduce the investment burden of the public sector and ensure the best possible safe services for consumers. However, implementation of the reforms should take into careful consideration adverse social, economic and environmental implications, and may thus require gradual introduction.

43. The importance of structural reforms in the energy sector, including market reforms, and market-based pricing, including through eliminating inefficient monopolies, which are necessary to make energy-producing and energy-consuming activities supportive of sustainable development, was raised. However, concern was expressed on this matter.

44. The importance of the internalization of externalities to achieve accurate price signals was highlighted. However, concerns were raised on the matter.

45. There is also a need to encourage the reduction and gradual elimination of subsidies in energy production and consumption that inhibit sustainable development. Such policies should take fully into account the specific needs and conditions of developing countries, particularly the least developed countries and economies in transition, taking into account the fact that the social objectives of most existing energy subsidies can often be met more efficiently by means of well-targeted social programmes.

46. The external debt problem can continue to hamper the efforts of developing countries to achieve sustainable development, and could be a barrier to private national and international investments.

47. When investing in the development of new energy sources, environmental protection in general and protection of endangered species and biodiversity in particular should be taken into full consideration.

International and regional cooperation

48. International and regional cooperation play an important role in addressing the challenges of energy for sustainable development. The potential of the regional commissions and other regional organizations, including regional development banks, has to be fully utilized in that regard. Further consideration could be given to regional energy cooperation agreements to meet energy requirements. The development of regional cooperation agreements and projects, with the assistance of donor countries and multilateral institutions, could be particularly effective in enhancing energy access. Energy policy and planning are important for effective international cooperative activities in the development of energy systems that contribute to sustainable development. Governments have a primary role to play in energy policy and planning.

49. There is a need for donors, international financial institutions and the United Nations system to pay particular attention to issues relating to the least developed countries and the poorest communities. International cooperation should focus in particular on the support for delivery of energy in support of sustainable development as a means for providing services to reduce poverty and promote the development process.

50. There is a need to intensify international cooperation, both North-South and South-South cooperation, in order to create environmentally sound, cost-effective and affordable energy systems. It is also essential to ensure international cooperation for

promoting energy conservation, the improvement of energy efficiency, the use of renewable energy and research and development and the dissemination of innovative energy technologies. As noted above, international cooperation is also needed in the areas of capacity-building, financing and providing access to information on environmentally sound energy technologies.

B. Programme of work between the first and second sessions of the Group of Experts

51. The Group of Experts welcomed the efforts of Governments and organizations to organize activities in relation to its work, in particular proposed activities at the regional level, and took note of various ongoing and planned activities, which are listed below. The results of such activities could provide valuable inputs to the work of the Group of Experts. However, any decisions on policy recommendations to be presented to the ninth session of the Commission on Sustainable Development would rest with the Group of Experts itself.

52. The Group of Experts recommended to all countries and organizations planning or proposing meetings or expert consultations relevant to its work to ensure open-ended, transparent, participatory and representative nature of such initiatives, and balanced and active involvement of developed and developing countries from all regions and groups and relevant stakeholders, reflecting a range of interests and views. The organizers, in the course of their preparations, could consult with the Co-Chairmen and the secretariat of the Group of Experts, as appropriate.

Ongoing and planned initiatives which will contribute to the work of the Ad Hoc Group of Experts

53. The following is a list of activities/events related to the work of the Group of Experts:

Global 2000 Conference and Trade Show: Global Opportunities for Business and the Environment, Vancouver, 22-24 March 2000

Gas Technology Symposium 2000, Calgary, 3-5 April 2000 (contact http://www.ceri.ca)

World Bank Group Energy Week: Energy and Poverty, Washington, D.C., 10-14 April 2000 (contact: www.worldbank.org)

2000 Ethanol Vehicle Challenge: Ottawa to Windsor, Ottawa and Windsor, Canada, 13-20 May 2000 (contact: http://www.transportation.anl.gov)

Fourth European Conference on Mobility Management, Austria, 18 and 19 May 2000, organized by the Government of Austria

World Forum on Energy Regulation, Montreal, 21-24 May 2000 (contact: http://www.erngyforum.org)

Hydrogen Millennium: Tenth Canadian Hydrogen Conference, Quebec City, 28-31 May 2000 (contact: http://www.uqtr.uquebec.ca/IRH)

Seminar on energy pricing and subsidies, Prague, June 2000, organized by ECE

Canadian International Petroleum Conference: Technology 2000, Your Competitive Advantage, Calgary, 4-8 June 2000 (contact: http://www.petsoc.org/cipcprogram.html)

World Petroleum Congress, Calgary, 11-15 June 2000 (contact: http://www.wpc2000.com)

"Electricity: the new millennium", Montreal, 18-21 June 2000, meeting hosted by Hydro Quebec and the Canadian Electricity Association (contact: http://www.eei.org/2000)

International Fuel Ethanol Workshop and Trade Show, Windsor, Canada, 20-23 June 2000 (contact: http://www.bbiethanol.com/ internationalcontent.htm)

International Expert Meeting on Environmental Practices in Offshore Oil and Gas Activities, Stavanger, Norway, 29-30 June 2000

Committee on Energy and Natural Resources for Development, second session, New York, 14-25 August 2000

Ministerial Conference on Environment and Development in Asia and the Pacific, Kitakyushu City, Japan, 31 August-5 September 2000, organized by ESCAP (contact: http://www.unescap.org)

Business and Investment Forum for Renewable Energy and Energy Efficiency in Asia and the Pacific, Kuala Lumpur, 4-7 September 2000, organized by the Malaysian Government with the support of the World Solar Commission secretariat

Canada's Energy Efficiency Conference and Awards 2000: Infinite Possibilities Powered by Innovation, Ottawa, 10-12 October 2000 (contact: http://oee.nrcan.ca/conference)

Second International Conference and Exhibition on World Solar Cooking and Food Processing, South Africa, autumn 2000, organized by a local organization and the World Solar Academy and supported by the World Solar Commission secretariat

Business and Investment Forum for Renewable Energy in the Arab States, Muscat, autumn 2000, organized by the Agence de l'environnement et de la maîtrise de l'énergie (France), the Commission of the European Communities, the Catalan Energy Institute (Spain), and UNESCO, with the support of the World Solar Commission secretariat

Intergovernmental task force on the ECE contribution to the ninth session of the Commission on Sustainable Development, *inter alia*, through identifying regional priorities and organizing a high-level multi-stakeholder forum on the theme "Sustainable energy in a competitive market: forging partnerships", November 2000

Seventh International Energy Forum (a dialogue between consumers and producers of petroleum), Riyadh, 17-19 November 2000

Renewable Energy Exhibition: ELEC 2000, Paris, 11-15 December 2000, organized by ELEC 2000, the World Solar Commission secretariat and the World Solar Business and Investment Council

Village Power 2000, co-sponsored by the World Bank Group and National Renewable Energy Laboratories, December 2000

Workshop on Energy Efficiency in the Oil and Gas Sector (for experts from the region and outside the region), to be organized by the Islamic Republic of Iran

Ten regional workshops on energy efficiency and climate change, to be organized by ECE

Workshop on the design and implementation of energy policies in the context of globalization, market restructuring and the environment for francophone countries of South-East Asia and Latin America, sponsored by France

Dialogues at the parliamentary level in the Latin American and the Caribbean on regulations in the energy sector for sustainable development, organized by ECLAC in cooperation with the European Union

Launching a global forum on sustainable energy in Austria in late 2000 (to build partnerships and consider action required for supporting sustainable development and modernization of rural energy (contact: http://www.sustainable-energy.org)

Launching of the Sustainable Energy Advisory Facility by UNEP, with the support of the Danish Ministry of Foreign Affairs (the Facility will assist developing countries in a range of activities related to sustainable energy)

World Energy Assessment, to be published by UNDP, the United Nations Secretariat and the World Energy Council in September 2000

Asia-Pacific regional position paper on energy and sustainable development, to be prepared by ESCAP in consultation with its members and associate members

FAO working document on linkages between agriculture and energy

Draft special report on technology transfer of the Intergovernmental Panel on Climate Change

Project on energy and sustainable development in Latin America and the Caribbean (comprising policy analysis, preparation of a policy guidebook and seminars at the subregional levels), managed by ECLAC, the Latin American Energy Organization and the German Agency for Technical Cooperation

Further work to be undertaken in preparation for the second session of the Group of Experts

54. The following work is to be undertaken in preparation for the second session of the Group of Experts:

(a) Solicitation of views of Governments on the key issues identified in the present report;

(b) Preparation of case studies on specific issues discussed during the first session of the Group of Experts.

III. Provisional agenda for the second session

55. At its 7th meeting, on 10 March, the Group of Experts adopted the agenda for the second session and decided to recommend it to the Commission on Sustainable Development at its eighth session (see sect. I, draft decision).

IV. Adoption of the report

56. At its 7th meeting, on 10 March, the Group of Experts adopted the report as orally corrected and took note of the Co-Chairman's summary of the discussions (see sect. II.A).

V. Organizational matters

A. Opening and duration of the session

57. The Ad Hoc Open-Ended Intergovernmental Group of Experts on Energy and Sustainable Development of the Commission on Sustainable Development met in New York from 6 to 10 March 2000, in accordance with Economic and Social Council decision 1999/280 of 29 July 1999. The Group held 7 meetings (1st-7th meetings).

58. The session was opened by the Vice-Chairman of the Commission on Sustainable Development, Choi Seok-Young (Republic of Korea).

59. The Director of the Division for Sustainable Development made an introductory statement. The Chairman of the World Energy Assessment Editorial Board made a presentation.

B. Election of officers

60. At its 1st meeting, on 6 March, the Group of Experts elected Mohammad Reza Salamat (Islamic Republic of Iran) as Co-Chairman by acclamation. The Group of Experts also elected Irene Freudenschuss-Reichl (Austria) as Co-Chairman by secret ballot.

61. At the same meeting, the Group of Experts elected Marcio Numes (Brazil) and Jaroslav Marousek (Czech Republic), as Vice-Chairmen by acclamation. One Vice-Chairman remains to be elected.

C. Agenda and organization of work

62. At its 1st meeting, on 6 March, the Group of Experts adopted its provisional agenda (E/CN.17/ESD/2000/1) and approved its organization of work. The agenda was as follows:

1. Election of officers.
2. Adoption of the agenda and other organizational matters.
3. Preparations for the ninth session of the Commission on Sustainable Development, on energy issues.
4. Provisional agenda for the second session of the Group of Experts.
5. Adoption of the report of the Group of Experts on its first session.

D. Attendance

63. The session was attended by representatives of 33 States members of the Commission on Sustainable Development. Observers for other States Members of the United Nations and for the European Community, representatives of organizations of the United Nations system and secretariats of treaty bodies, as well as observers for intergovernmental and non-governmental organizations, also attended.

E. Documentation

64. The Group of Experts had before it the following documents:

(a) Report of the Secretary-General on national submissions (E/CN.17/ESD/2000/2);

(b) Report of the Secretary-General entitled "Energy and sustainable development: key issues" (E/CN.17/ESD/2000/3);

(c) Letter dated 15 February 2000 from the Permanent Representative of Portugal to the United Nations addressed to the Secretary-General, transmitting a European Union position paper on the first session of the Group of Experts (E/CN.17/ESD/2000/4);

(d) Report of the Committee on Energy and Natural Resources for Development on its first session (E/1999/32-E/CN.14/1999/2).

Annex

Attendance

Algeria:	Abdallah Baali, Abderrahmane Merouane
Angola:	
Belgium:	Andre Adam, Dirk Wouters, Nancy Mahieu, Jean-Paul Charlier
Brazil:	Marcio Nuñes, Barbara Briglia Tavora, Marcelo Dantas
Bulgaria:	Zvetolyuv Basmajiev
Cameroon:	Lokolo Michel Claude
Canada:	Yvan Jobin, Craig Wilson, Gerry Collins, Janet Stephenson, Peter Stokoe, Corey Peabody
China:	Shi Weiqiang
Colombia:	Alfonso Valdivieso, Mauricio Baquero, Andrea Alban
Côte d'Ivoire:	
Cuba:	Bruno Rodriguez Parrilla, Rafael Dausa Cespedes, Omar Rivero Rosario, Alfredo Curbelo Alonso, Ileana Nuñez Mordoche
Czech Republic:	Jan Kara, Jaroslav Maroušek
Democratic People's Republic of Korea:	
Democratic Republic of the Congo:	
Denmark:	Karsten Petersen, Thure Christiansen, Erik Tang, Thoms Becker
Djibouti:	
Egypt:	Ahmed Aboul Gheit, Ahmed Darwish, Hazem Fahmy, Ihab Gamaleldin, Hani Abdel Razek El Naquib
France:	Raymond Quereilhac, Pascal Dupuis, Daniel Le Gargasson, Bernard Devin, Daniel Brun
Germany:	Martin Lutz, Wolfhart Duerrschmidt, Reinhard Krapp, Klaus Loewe, Klaus Glasmacher, Ole Langniss, Bernhard Boesel
Guyana:	Samuel R. Insanally, Alison Drayton, George Wilfred Talbot

Hungary:	
India:	
Indonesia:	Makmur Widodo, Yoga Pratomo, Djauhari Oratmangun, Nenny Sri Utami, Ngurah Swajaya, Vitto Rafael Tahar
Iran (Islamic Republic of):	Bagher Asadi, Mohammad Reza Salamat, Mehdi Mirafzal, Mohsen Esperi, Ahmad Kadkhodazadeh
Ireland:	Martin Diskin, Dympna Hayes
Italy:	Giovanni Brauzzi, Giovannino Di Palma, Walter Galinetta, Fabio Cassese, Roberto Binatti
Japan:	Koichiro Seki
Kazakhstan:	
Lebanon:	Houssam Diab
Mauritania:	
Mauritius:	
Mexico:	
Mozambique:	
Netherlands:	Herman Verheij, Marja Cochius, Antje van Driel
New Zealand:	Michael Powles, Trevor Hughes, Grant Robertson
Nicaragua:	
Niger:	
Panama:	Fernando Diaz, Angelica Jacome
Paraguay:	
Peru:	
Philippines:	Libran N. Cabactulan, Miguel Bautista, Glenn F. Corpin
Portugal:	Antonio Monteiro, Nuno Brito, Antonio Botão, João Pedro Fins-do-Lago, Carlos Ferreira, Mario Garcia
Republic of Korea:	Oh Youngju, Kim Chang Seob
Russian Federation:	Nikolai V. Tchoulkov, Garigen S. Aslanian, A. A. Pankin, Dmitry I. Maksimychev, Sergey F. Bulgachenko, Sergey O. Fedorov
Slovakia:	Josef Stahl, Igor Vencel
Spain:	
Sri Lanka:	

Sudan:	
The former Yugoslav Republic of Macedonia:	Naste Calovski, Donka Gligorova, Goran Stevcevski, Nikola Cerepnalkovski
Tunisia:	Nejib Osman, Skander Ben Abdallah
United Kingdom of Great Britain and Northern Ireland:	Mark Runacres, Ian Symons, Scott Ghagan, Stephen Lowe, Richard Jones, Michael Massey
United States of America:	Mark G. Hambley, Jonathan Margolis, Ko Barrett, Jennifer Bergeron, William Breed, Lawrence Cohen, Michael Gallagher, Duncan Marsh, David Moses, Lynette J. Poulton, Kenneth Thomas, Gordon Weyland
Venezuela:	

States Members of the United Nations represented by observers

Australia, Austria, Antigua and Barbuda, Belarus, Cyprus, Finland, Gambia, Greece, Guatemala, Iceland, Iraq, Israel, Malta, Morocco, Nepal, Nigeria, Norway, Poland, Qatar, Romania, Samoa, Slovenia, South Africa, Suriname, Sweden, Togo, Trinidad and Tobago, Zimbabwe

Entities represented by observers

European Community

Non-Member States maintaining permanent observer missions at Headquarters

Holy See, Switzerland

Specialized agencies and related organizations

International Labour Office, Food and Agriculture Organization of the United Nations, United Nations Educational, Scientific and Cultural Organization, United Nations Industrial Development Organization, World Meteorological Organization, International Atomic Energy Agency

Intergovernmental organizations

International Union for the Conservation of Nature and Natural Resources

United Nations and related agencies

Economic and Social Commission for Asia and the Pacific, Economic Commission for Latin America and the Caribbean, Economic and Social Commission for Western Asia, United Nations Development Programme, United Nations Environment Programme, Global Environment Facility

Non-governmental organizations

Information Habitat and Energy and Climate Change Caucus

International Chamber of Commerce

World Sustainable Energy Coalition

United Nations E/CN.17/2000/13

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Progress made in providing safe water supply and sanitation for all during the 1990s

Report of the Secretary-General

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I. Introduction

1. In 1975, the World Health Organization (WHO) estimated that approximately 77 per cent of the urban population in developing countries had access to water supply either through in-house or through reasonable access to public standposts (see E/CONF.70/14). Approximately 75 per cent of the urban population had access to reasonable sanitation facilities, either by connection to public sewers or through household systems. The World Health Organization also estimated that 78 per cent of the rural population lacked access to safe water supply and 85 per cent lacked satisfactory sanitation facilities. Hence, at the time of the United Nations Water Conference (Mar del Plata, 14-25 March 1977), some 1.9 billion people lacked access to safe water and some 2 billion lacked adequate sanitation.

2. Concerned by this situation, the General Assembly, in its resolution 35/18 and as recommended in the Mar del Plata Action Plan,[1] proclaimed the period 1981-1990 as the International Drinking Water Supply and Sanitation Decade, during which Member States would assume a commitment to bring about substantial improvement in the standards and levels of drinking water supply and sanitation by the year 1990.

3. The General Assembly has conducted periodic monitoring of progress in providing access to the vast number of people without safe water and suitable sanitation throughout the 1980s and 1990s, which has shown that major changes in approaches to the provision of services have taken place. These changes have brought about a heightened awareness of the severity of the problem and innovative solutions to the provision of basic services but have not necessarily increased the pace of progress.

4. The reports prepared by the Secretary-General have consistently expressed the view that in spite of efforts to accelerate the rate of progress in the provision of services, little if any progress is being made in reducing the number of people lacking access to safe water supply and suitable sanitation facilities. In particular, they have sounded a note of alarm concerning the lack of progress in the provision of sanitation facilities. In its resolution 50/126, the General Assembly expressed deep concern that the current rate of progress in the provision of drinking water would be insufficient to satisfy the needs of a very large number of people by the year 2000, and that the lack of progress in the provision of basic sanitation services was likely to have dramatic environmental and health consequences in the near future.

5. The present report has been prepared pursuant to resolution 50/126 of the General Assembly. It endeavours to assess the current situation based on information provided jointly by the WHO/United Nations Children's Fund (UNICEF) joint monitoring programme. In view of the results, the report calls for a renewed commitment at the start of the new millennium to bring to an end the human misery associated with the lack of access to basic water supply and sanitation. It calls for action on a broad front, starting with an assessment or update by Governments of their current situation, based on reliable data and on the establishment of time-bound ambitious but realistic targets.

II. Overview of the current situation

A. Methodological considerations

6. Monitoring access to drinking water and sanitary excreta disposal facilities poses major methodological problems. A review of water and sanitation data from the 1980s and the early 1990s shows that the definition of safe water and sanitary disposal often differs not only from one country to another but also within a country. Furthermore, previous data were based on estimates by providers of the numbers of people served rather than the responses of consumers to household surveys. Indeed, through their rapid and often implausible change in levels of coverage from one point in time to a subsequent one, the data show that estimates of coverage within a country, irrespective of the collection method used, are often unreliable.

7. The present assessment of global coverage marks a shift from provider-based to consumer-based information, which aims to take more accurate account of actual use of facilities and initiatives taken by individuals and communities to improve facilities. Not only can these use patterns and initiatives differ from nationally compiled statistics, but experience shows that provider-based information often ignores post-installation breakdowns and service deficiencies.

I. Data collection

8. The assessment was carried out under the joint auspices of WHO and UNICEF, with financial support from the United Kingdom's Department for International Development and technical support from the Water and Environmental Health in London and Loughborough programme, a resource centre of the Department. Initially, a questionnaire was distributed to all WHO country representatives, with detailed instructions for the process by which it was to be completed. WHO staff (or, where appropriate, consultants or government officers) were to liaise with the local UNICEF country office and with the various national agencies involved in the provision of water and sanitation services.

9. Those completing the questionnaire were first to compile an inventory of existing sources of population-based data on access to water supply and sanitation, particularly national census reports, demographic and health surveys (DHS), and the multi indicator cluster surveys (MICS) carried out with support from UNICEF. DHS and MICS are sample surveys, covering several thousand households in each country; the samples are stratified to ensure that they are representative of the urban and the rural areas of each country. The coverage figures returned by each country with the endorsement of government officials were to be based as far as judged appropriate on the estimates arising from such surveys. It has to be stressed that this methodology alone is no guarantee of accuracy since independent quality control was not carried out and the robustness of the method and the data will have to be verified over time. Therefore, like any other socio-economic data, the data must be assigned statistical confidence limits on the basis of sampling errors, and this should be borne in mind when interpreting and analysing the data presented in tables 1 and 2.

2. Definitions of access

10. The assessment attempted to define access to water supply and sanitation in terms of the types of technology and levels of service afforded. For water, this included house connections, public standpipes, boreholes with handpumps, protected dug wells, protected springs and rainwater collection; allowance was also made for other technologies, as locally defined. Reasonable access was broadly defined as the availability of at least 20 litres per person per day from a source located within 1 kilometre of the user's dwelling. However, it should be noted that even this broad definition is difficult to apply rigorously in the field, particularly in poor rural and peri-urban communities, where daily quantities used and distances to the source are difficult to measure. Types of source which did not give reasonable and ready access to water for domestic hygiene purposes, such as tanker trucks and bottled water, were not included. Sanitation was defined to include connection to a sewer or septic system, pour-flush latrine, simple pit or ventilated improved pit latrine, with allowance again for acceptable local technologies. The excreta disposal system was considered adequate if it was private or shared (but not public) and hygienically separated human excreta from human contact. The types of sanitation that were not considered safe were bucket latrine, overhang latrine, open latrine, uncovered pit latrine or open field, "bush" sanitation.

11. Reasonable access to water and sanitation, as defined above, does not imply that the level of service or quality of water is "adequate" or "safe". No discounting of coverage figures was made to allow for intermittence or poor quality of the water supplies, although the instructions suggested that piped systems should not be considered as "functioning" if they were not operating at over 50 per cent capacity on a daily basis, and that hand pumps should not be considered if they were not operating for at least 70 per cent of the time. Efforts were made to impose these definitions as consistently as possible in the figures presented here. However, there were tendencies in some regions, where higher levels of service are more prevalent, to set stricter requirements for access in comparison to others, and these tendencies may nevertheless have been reflected to some degree in the data.

Table 4
Water supply and sanitation coverage by region, 1990-2000
(Population in millions)

Region/sector	1990				2000			
	Population	*Number served*	*Percentage coverage*	*Number unserved*	*Population*	*Number served*	*Percentage coverage*	*Number unserved*
Africa								
Urban water supply	197	168	85.0	30	297	253	85.1	44
Rural water supply	418	154	36.8	264	487	223	45.7	264
Total water supply	615	321	52.3	293	784	476	60.7	309
Urban sanitation	197	164	83.1	33	297	249	83.8	48
Rural sanitation	418	185	44.4	232	487	210	43.0	278
Total sanitation	615	349	56.8	266	784	459	58.5	326
Asia								
Urban water supply	1 029	971	94.3	59	1 352	1 254	92.7	98
Rural water supply	2 151	1 410	65.5	742	2 331	1 734	74.4	597
Total water supply	3 181	2 380	74.8	800	3 683	2 988	81.1	695
Urban sanitation	1 029	678	65.9	351	1 352	1 047	77.3	305
Rural sanitation	2 151	481	22.4	1 670	2 331	691	29.6	1 640
Total sanitation	3 181	1 159	36.4	2 021	3 683	1 738	47.2	1 945
Europe								
Urban water supply	..	..	..	..	545	542	99.5	2
Rural water supply	..	..	..	..	184	161	87.3	23
Total water supply	..	..	..	..	729	703	96.5	26
Urban sanitation	..	..	..	..	545	537	98.5	8
Rural sanitation	..	..	..	..	184	137	74.3	47
Total sanitation	..	..	..	..	729	673	92.4	56
Latin America and the Caribbean								
Urban water supply	313	283	90.4	30	391	353	90.3	38
Rural water supply	128	72	56.4	56	128	74	57.6	54
Total water supply	440	355	80.6	86	519	427	82.2	92
Urban sanitation	313	247	78.9	66	391	335	85.7	56
Rural sanitation	128	39	30.7	89	128	56	43.5	72
Total sanitation	440	286	64.9	155	519	391	75.3	128
Northern America								
Urban water supply	..	..	..	..	239	239	100.0	0
Rural water supply	..	..	..	..	71	71	99.9	0
Total water supply	..	..	..	..	310	310	100.0	0
Urban sanitation	..	..	..	..	239	239	100.0	0
Rural sanitation	..	..	..	..	71	71	99.9	0
Total sanitation	..	..	..	..	310	310	100.0	0

Region/sector	1990 Population	1990 Number served	1990 Percentage coverage	1990 Number unserved	2000 Population	2000 Number served	2000 Percentage coverage	2000 Number unserved
Oceania								
Urban water supply	..	..	..	..	21	21	98.5	0
Rural water supply	..	..	..	..	9	9	95.4	0
Total water supply	..	..	..	..	30	30	97.6	1
Urban sanitation	..	..	..	..	21	20	96.0	1
Rural sanitation	..	..	..	..	9	8	91.3	1
Total sanitation	..	..	..	..	30	29	94.6	2
World								
Urban water supply	..	..	..	..	2 845	2 662	93.6	183
Rural water supply	..	..	..	..	3 210	2 270	70.7	940
Total water supply	..	..	..	..	6 055	4 932	81.5	1 123
Urban sanitation	..	..	..	..	2 845	2 427	85.3	418
Rural sanitation	..	..	..	..	3 210	1 172	36.5	2 038
Total sanitation	..	..	..	..	6 055	3 599	59.4	2 456

Source: based on data obtained by the Division for Sustainable Development of the United Nations Secretariat.

Note: Two dots (..) indicate a lack of comparable data; totals may differ from the sum of other columns because of rounding.

3. Data analysis

12. Returns were received from a total of 150 countries. The reported figures were accepted unless the existing data from previous household surveys gave reasonable grounds to suspect that they might be inaccurate. In that case, a query was sent back to the country through WHO, pointing out the difference between the reported figures and the survey data and requesting clarification or correction of the difference. Where the problem was not resolved, the survey data were used judiciously, having regard to the time elapsed since the survey, the categories under which the results were reported, the sample size and so on. This necessarily compromises the validity of the sample data. Particular care was taken with larger countries, where conditions have a disproportionate effect on global and regional averages. In particular, the 40 most populous countries account for some 90 per cent of the total global population, and these were the subject of special attention.

13. In view of the change in methodology between the present and previous assessments, only a partial comparison of the present results with those obtained in previous years was possible (see table 1). However, in an effort to assess any trends with time, coverage figures were estimated for some countries for 1990 as well as 2000. Since the questionnaire did not request figures for 1990, these estimates are entirely based on survey data, and were made only for those countries where such data exist with sufficient consistency and over a sufficient period of time for a trend to be discerned. However, this occurred in countries totalling well over two thirds of the world population, so that it is still possible to make meaningful though cautious statements about global trends during the decade of the 1990s. Coverage data during this period for Africa, Asia, and Latin America and the Caribbean were deemed to be sufficiently reliable as indicators of general trends in these regions.

14. A substantial degree of uncertainty remains in many countries, and there is still a need to further refine and develop the monitoring process. If the monitoring of access to water supply and sanitation is weak at the national level, it is generally much weaker, though more urgently needed, at the local level. Only when reliable coverage figures are available for individual regions, cities and districts will it be possible for the monitoring process to contribute significantly to national planning.

B. Service coverage in numbers

15. Current estimates confirm the concerns expressed in previous reports. At the start of 2000, at least 1.1 billion people still lack access to water supply and almost 2.5 billion to sanitation. The raw data upon which the present report is based is presented in table 1. The 1990 sampling data for Europe was insufficient and data for 2000 shown in the table are likely to underestimate substantially the number of people lacking access to water supply and sanitation, particularly in the economies in transition of Central and Eastern Europe due to a lack of sufficient data. In fact, a report prepared for the Water Supply and Sanitation Collaborative Council in 1995 estimated that some 38 million people of Central and Eastern Europe lacked access to water supply.[2] Similarly, differences in sampling between 1990 and 2000 for Oceania did not permit a sufficiently reliable analysis of trend for that area. Although no 1990 estimates are reported for the two countries of Northern America in table 1, it can be assumed that, as in 2000, practically universal coverage already existed in 1990.

16. Table 2 summarizes the revised estimates for water supply and sanitation service coverage for the comparable regions of Africa, Asia,[3] Latin America and the Caribbean between 1990 and 2000. For these regions, which are critical in terms of poverty and development, progress towards full coverage is slow everywhere. Even if the rate of progress could be maintained, full coverage for drinking water cannot reasonably be anticipated before 2050 in Africa, 2025 in Asia and 2040 in Latin America and the Caribbean. Progress is relatively slight for countries and categories with high coverage (for example, urban water and sanitation in Africa and Latin America and the Caribbean). Access to sanitation is usually much better in the urban context and it is evident that a very special effort will be required in Asia, where there is only 30 per cent rural coverage, and in rural Africa, where coverage declined over the decade. Overall, for the three regions, which comprise 82.5 per cent of the world's population and the great majority of developing countries, coverage has increased by less than 6 per cent for water supply and less than 10 per cent for sanitation.

1. Global and regional water supply

17. Although the figures concerning the number of people still lacking access to water supply remain sobering, some progress has been achieved in the last decade. According to the new methodology, approximately 4.9 billion people worldwide, representing about 81 per cent of the total population, currently have access to water supply (see table 1).

18. Regionally, progress with regard to water supply is reported for Asia, where coverage increased from approximately 75 per cent of the total population in 1990 to 81 per cent by 2000. Currently, nearly 3 billion people have access to water supply. The addition of some 607 million people to the ranks of those provided with access to water resulted in a decrease of 105 million in those lacking such access, currently totalling 695 million. Progress was evident throughout the various subregions (Eastern Asia, South-Central Asia, South-Eastern Asia and Western Asia), but most notably in the South-Central region. In terms of percentage of the total population, access to water supply remains lower in Eastern and South-Eastern Asia than in the other subregions.[4]

19. By contrast, the total population in Africa without access to water increased by some 15 million, even though services were provided to an additional 154 million and coverage increased from 52 to 61 per cent of the population. Currently, 476 million people have access to water supply, but some 309 million people still lack access to water supplies in the region. Progress in Northern and Western Africa, leading to a decrease in the number of people lacking access to water supply, was offset by increases elsewhere in East Africa, Middle Africa and Southern Africa. In relative terms, access to water supply is considerably higher for Northern and Southern Africa (about 85 per cent) than in Eastern, Middle and Western Africa, where coverage ranges between about 45 and about 55 per cent.

Table 2

Progress achieved in terms of rates of change of coverage in the three comparable regions during the period 1990-2000

	Water supply			*Sanitation*		
	1990	*2000*		*1990*	*2000*	
Region	*(percentage)*		*Change*	*(percentage)*		*Change*
Africa						
Urban	85.0	85.1	+0.1	83.1	83.8	+0.7
Rural	36.8	45.7	+8.9	44.4	43.0	-1.4
Total	**52.3**	**60.7**	**+8.4**	**56.8**	**58.5**	**+1.7**
Asia						
Urban	94.3	92.7	-1.6	65.9	77.5	+11.6
Rural	65.5	74.4	+8.9	22.4	29.6	+7.2
Total	**74.8**	**81.1**	**+6.3**	**36.4**	**47.2**	**+10.8**
Latin America and Caribbean						
Urban	90.4	90.3	-0.1	78.9	85.7	+6.8
Rural	56.4	57.6	+1.2	30.7	43.5	+12.8
Total	**80.6**	**82.2**	**+1.7**	**64.9**	**75.3**	**+10.4**
Total for three regions						
Urban	92.4	91.2	-1.2	70.8	80.0	+9.2
Rural	60.7	68.9	+8.2	26.1	32.5	+6.4
Grand total	**72.1**	**78.0**	**+5.9**	**42.4**	**51.9**	**+9.5**

Source: same as table 1.

20. In Latin America and the Caribbean, coverage barely increased, from about 81 to 82 per cent of the total population. Nearly 427 million people currently have access to water supply. Even though an additional 72 million people gained access to water, the number of inhabitants lacking access to services increased by 6.6 million to a total of 92 million people. The available data suggests that significant progress took place during the 1990s in the Caribbean region as a whole, where the number of people without access to water supply may have actually decreased. Such progress, however, was offset by increases in the number of people lacking access to water supply in both Central and South America, where relative coverage remained essentially unchanged. Still, in percentage terms, coverage in the Caribbean remains lower than in Central and South America.

21. In the case of the developing countries of Africa, Asia, and Latin America and the Caribbean as a group, coverage has increased by about 6 per cent of the population (see table 2): almost 3.9 billion people have access to water supply in these regions. But even though an additional 835 million people have gained access to water and the number of people lacking such access may have decreased by as much as 80 million people since 1990, the number of individuals lacking access to water supply in these regions is still estimated to be over 1 billion.

2. Global and regional sanitation

22. The global picture concerning access to sanitation remains cause for concern, although 3.6 billion people, representing 59 per cent of the total population, currently have access to sanitation. On the basis of comparable data (excluding Europe, Northern America and Oceania), almost 800 million people gained access to sanitation facilities during the 1990s, and although the number of people lacking such access in comparable regions has decreased by 40 million, it is still very high, at almost 2.4 billion.

23. Coverage in Asia increased from about 36 to 47 per cent of the total population: some 1.7 billion people in the region have access to sanitation. The addition of about 578 million people to those having access to sanitation resulted in a decrease by some 77 million to the number of those lacking access to facilities, currently totalling 1.9 billion. Progress in decreasing the number of people lacking access to sanitation is evident in all subregions with the possible exception of South-Central and Western Asia, where relative coverage is the highest, at about 84 per cent. In all the other subregions, relative coverage still remains low, ranging between 38 and 71 per cent of total population.

24. In Latin America and the Caribbean, coverage increased from about 65 per cent in 1990 to 75 per cent by the start of 2000. A total of 390 million people have access to sanitation. Some 105 million people gained access to sanitation and the number of people without access decreased by some 26 million. Overall, 128 million people in the region still lack access to sanitation. The data suggests that decreases in the number of people lacking access to sanitation took place in all three subregions.

25. In Africa, coverage increased only slightly, from about 57 to 58 per cent of total population. Currently, 459 million people have access to sanitation. Although an additional 110 million people gained access to services, the number of unserved increased by an additional 60 million to reach a total of 326 million. Only in Northern and Southern Africa, where the percentage of people with access to sanitation stands at about 81 per cent, did the number of people lacking access decrease. Elsewhere in the region, the number of unserved continued to increase and relative coverage remained low, ranging between 37 and 53 per cent.

3. Urban scenario

26. As table 1 shows, although 93 per cent of the world's urban population is covered by safe water supply and 85 per cent by sanitation facilities, in urban areas worldwide 183 million people still lack access to water supply and 418 million to sanitation.

Urban water supply

27. Given the high rates of urban population growth, increases in urban water supply coverage, significant as they were, were insufficient to prevent an increase in the number of urban dwellers lacking access to water supplies. About 2.7 billion people in urban areas, nearly 94 per cent of the world's urban population, have access to water supply. On the basis of comparable data (excluding Europe, Northern America and Oceania), some 438 million people gained access to water supply during the 1990s. However, the number of urban dwellers lacking access to water supply in the comparable regions also increased by nearly 62 million during the same period.

28. In Africa, the percentage of the population with access to safe water remained at 85 per cent. Nearly 253 million urban dwellers in the region currently have access to water supply. Even though some 85 million people gained access to services, the number of urban dwellers without access to water supply increased by 15 million to a total of 44 million. The data suggest that none of the subregions succeeded in keeping pace with urban population growth. The stress in providing services appears to have been less in Northern Africa and most serious in Eastern and Western Africa.

29. In Asia, the level of coverage may have decreased slightly, from 94 to 93 per cent of the total urban population: 1.3 billion people have access to water supply and an additional 283 million people gained access to services. Nevertheless, the number of people without services increased by some 39 million, and 98 million urban dwellers still lack such access. A decrease by some 5 million people in the number of urban dwellers without access to water supply is reported for Western Asia, where an increase in service by some 42 million took place. Elsewhere, increases in service coverage were insufficient to cope with population growth, particularly in Eastern Asia.

30. In Latin America and the Caribbean, coverage remained essentially static, at 90 per cent of the total urban population. Nearly 353 million urban dwellers have access to water supply. Even though an additional 70 million people gained access to services, the ranks of those lacking facilities increased by nearly 8 million. The number of people without access amount to 38 million. Successes in the Caribbean and Central American subregions in decreasing the number of people lacking access to water supply, particularly in the former, were offset by increases in South America.

Urban sanitation

31. Progress in the provision of urban sanitation was more encouraging. Nevertheless, relative coverage still remains considerably below coverage for urban water supply: 2.4 billion people, 85 per cent of the total urban population, have access to sanitation facilities. On the basis of comparable data (excluding Europe, Northern America and Oceania), 542 million people gained access to urban sanitation facilities during the 1990s, while the number of people lacking such access in the comparable regions decreased by about 41 million. Decreases in the number of urban inhabitants without access to sanitation was the result of progress achieved in the Asian and the Latin American and Caribbean regions.

32. Relative coverage in Asia increased from 66 to 77 per cent between 1990 and 2000. Approximately one billion urban dwellers have access to sanitation, an increase of approximately 369 million since 1990. The number of people without access to services decreased by some 46 million, to a total of 305 million, due to decreases in Eastern, South-Central and South-Eastern Asia.

33. In Latin America and the Caribbean, urban sanitation coverage increased from about 79 per cent in 1990 to 86 per cent in 2000: some 335 million urban dwellers have access to sanitation. As a result of an increase of 88 million since 1990 in the number of urban dwellers with access to sanitation, the number of inhabitants who lack access to sanitation services decreased by 10 million to a total of nearly 56 million. Progress in decreasing the number of unserved was evident in all three subregions.

34. In Africa, urban sanitation coverage has increased slightly, from about 83 per cent to nearly 84 per cent in 2000. Currently, some 249 million urban dwellers have access to sanitation. The provision of sanitation facilities to some 85 million urban dwellers in Africa since 1990 was insufficient to prevent an increase of nearly 15 million in the number of people lacking access to services: 48 million urban dwellers lack sanitation. The data suggests that Eastern, Middle and Western Africa are particularly vulnerable to stresses due to urban population growth.

4. Rural scenario

35. As table 1 shows, only 70 per cent of the world's rural population is covered by safe water supply and barely 37 per cent by sanitation facilities.

Rural water supply

36. Globally, some progress has taken place between 1990 and 2000 with regard to rural water supply. In total, nearly 2.3 billion people in rural areas currently have access to water supply, representing 71 per cent of the world's rural population (see table 1). On the basis of comparable data (excluding Europe, North America and Oceania), almost 400 million rural dwellers gained access to water supply during the 1990s, whereas the number of rural dwellers lacking access to water supplies decreased by some 150 million to a total of

915 million in 2000. Decreases in the number of people lacking access to water supply in rural areas have been due mostly to the significant progress achieved in Asia and to a lesser extent in Latin America and the Caribbean.

37. In Asia, relative coverage significantly increased from about 65 per cent of the rural population in 1990 to 74 per cent at the start of 2000: 1.7 billion people in rural Asia currently have access to water supply. As an additional 324 million people benefited from access to water, the actual number of rural dwellers lacking access to water is reported to have decreased by some 145 million to a total of 597 million. Such decreases took place throughout all subregions, with the apparent exception of Western Asia. They were particularly significant in Eastern and South-Central Asia.

38. In Latin America and the Caribbean, relative coverage increased slightly from 56 to 58 per cent during the last decade, totalling 74 million. In the face of a virtually unchanged rural population, an additional 1.7 million people received access to water and the total number of dwellers lacking access to water services decreased by 1.3 million to a total of 54 million. Only in Central America did the number of rural dwellers lacking access to water supply increase.

39. The African region has witnessed a significant increase in the provision of water supply to rural areas. Coverage has increased from 37 per cent in 1990 to 46 percent by the start of 2000: 223 million rural inhabitants have access to water. In spite of an increase by 69 million people gaining access to water supply, the total number of rural inhabitants without access to water increased marginally (by about half a million) to a total of 264 million. In percentage terms, rural water supply coverage remains low, in the range of 29 to 46 per cent in Eastern, Middle and Western Africa.

Rural sanitation

40. The percentage of the world's rural population with access to sanitation remains alarmingly low — 37 per cent at the start of 2000. Approximately 1.2 billion people currently have access to sanitation in rural areas, while some 2 billion people are reported to lack such access. On the basis of comparable data (excluding Europe, Northern America and Oceania), 252 million people gained access to sanitation facilities during the 1990s, while the number of people lacking such access in comparable regions decreased by about 1 million. While some progress has been achieved both in Asia and in Latin America and the Caribbean, in Africa there has been a decrease in the rate of coverage.

41. In the Asian region, coverage has increased from 22 per cent in 1990 to nearly 30 percent of the rural population in 2000; 691 million people in rural areas have access to sanitation. As a result of an increase of some 210 million who gained access to facilities during the 1990s, the number of people lacking access has decreased by some 30 million to a total of 1.6 billion people. Decreases in the number of people without access to sanitation took place in all subregions with the exception of Western Asia, though they are reported to have been more significant for Eastern and South-Central Asia.

42. In Latin America and the Caribbean, with a virtually static rural population, coverage increased from 31 to 44 per cent of the rural population between 1990 and 2000. A total of 56 million people in rural areas currently have access to sanitation facilities. Since approximately 17 million people received access to sanitation facilities, the reported number of people lacking sanitation decreased by nearly the same amount to an estimated 72 million people. Decreases in the number of rural inhabitants without access to sanitation were evident in each of the three subregions.

43. In the African region, relative coverage decreased slightly, from 44 to 43 per cent to a total of 210 million people in 2000. Although the number of rural dwellers having access to sanitation increased by nearly 25 million, the number of those lacking such access also increased by 45 million. Currently 278 million people do not have access to sanitation facilities. Decreases in Northern and Southern Africa in the number of people devoid of access to sanitation were offset by increases elsewhere in the region.

5. Water supply, environmental sanitation and displaced people due to civil strife and natural disasters

44. In addition to the above estimates of urban and rural dwellers who still lack access to safe water and sanitation, their ranks are swelled by displaced persons due to civil strife and natural disasters, such as floods and droughts. The severity of natural disasters and the frequent institutional weakness and absence of effective disaster prevention and mitigation policies

results every year in thousands of people facing severe shortages of water and sanitation facilities, which must be provided on an emergency basis. Civil strife also results in massive amounts of refugees, for whom shelter must be provided in camps with makeshift water supply and sanitation facilities. In 1998, for instance, the Office of the United Nations High Commissioner for Refugees (UNHCR) addressed the needs of 11.5 million refugees worldwide and some 5 million internally displaced people.

C. Reliability of services and water quality

45. The seriousness of the situation described above is compounded by the lack of reliability of water supply delivery systems. The rapid rates of urbanization in developing countries are severely straining already inadequate networks. Frequently, water is delivered only a few hours a day or even a few days a week. A survey conducted by the Asian Development Bank is illustrative of the problem. Of the 50 utilities studied, serving some 206 million people, only 26 utilities, comprising about 41 per cent of the total population surveyed, provided water 24 hours per day. Eleven cities, amounting to 35 per cent of the total population, received water 12 or less hours per day, and eight cities, with 23 per cent of the total population, supplied water between 12 and 18 hours a day. The same survey showed that unaccounted for water losses ranged from 6 to as much as 70 per cent of the total water delivered, frequently exceeding 50 per cent.[5]

46. Lack of investment in management and maintenance and/or a lack of water treatment facilities often results in the production of retail water that is unsuitable for human consumption. The most serious water quality problem in developing countries continues to be the pollution of water with human faeces. Some two million children die every year from diseases related to water and sanitation, many by the ingestion of faecal matter in water used for drinking and cooking. While it is now recognized that the faecal-oral cycle is best broken through an integrated programme emphasizing the promotion of hygiene behavioural change and environmental sanitation, the physical protection of water sources from faecal contamination remains a key issue. Protecting the source does not ensure that the water people drink will be bacteria-free. There are many cases of water which is bacteria-free at the source becoming contaminated during transportation, storage and consumption. Most efforts to reduce or eliminate such water contamination are centred on the provision of effective hygiene education in the community.

47. The pollution of water supplies by chemical contaminants is a more localized problem than that of bacteriologically contaminated water. However, specific contaminants can greatly affect the quality of water in different areas. One of the most serious recent problems is the contamination of domestic water supplies by naturally occurring inorganic arsenic in parts of Southern Asia. Another naturally occurring chemical contaminant is fluoride, which in high concentrations can cause skeletal fluorosis, a very serious debilitating and ultimately fatal disease.

D. Flow of financial resources

48. The doubling of public expenditures in developing countries on health as a percentage of gross national product (GNP) from 1960 to 1995[6] is indicative of increases in public financing to the sector. Nevertheless, the gap between the level of investments needed in order to achieve full water and sanitation coverage and current levels of investment remains large.

49. Current estimates put national expenditures for water supply and sanitation in developing countries at US$ 10-25 billion, most of which are spent on higher-level services in urban centres.[7] In addition, total private investments in water and sanitation infrastructures in developing countries between 1990 and 1997 are estimated at an additional $25 billion, and official development assistance (ODA) for water supply and sanitation was estimated at $2.9 billion in 1996, constituting 6.6 per cent of total development assistance.

50. An estimate presented in connection with the sixth session of the Commission on Sustainable Development in 1998 indicated that an additional $100 billion would be required in order to achieve full coverage over the ensuing 10 years. More recently, the Water Supply and Sanitation Collaborative Council has estimated that annual investment of $11 billion would be required in order to achieve full coverage by 2025 through the use mainly of low-cost technology.[8] These

estimates do not account for the additional investments that would be required for the extension of networks in growing urban conglomerations. They do not include the investment that is essential for the operation and maintenance of existing systems if they are not to be allowed to decay, or for the upgrading of systems in order to improve their reliability. In addition, they do not take into account the investments required for the installation of new water treatment facilities designed to improve the quality of water delivered to the consumer, or investment needed for the extension and maintenance of sewage systems.

51. The level of the external debt in developing countries, reported at 36 per cent of GNP in 1997[9] remains an obstacle to further investments. This is particularly the case for developing countries, where the overall external debt of the countries in this category amounts to 92.3 per cent of GNP.

52. Ideally, once they have achieved financial and administrative autonomy, public or private utilities would not need to rely on grants for capital investments, operation and maintenance. However, as illustrated by the survey of 50 utilities in Asia, most developing countries are currently far from reaching this objective: of the 50 utilities, 10 are 100 per cent dependent on grant financing; only 19 do not require access to grants.[10]

E. Environmental sanitation and health

53. As a result of the rapid urbanization and increasing industrialization in developing countries, the neglect of solid waste and sewage is the cause of major health problems. The comprehensive assessment of the freshwater resources of the world, submitted to the General Assembly at its nineteenth special session, in June 1997, through the Commission on Sustainable Development at its fifth session, reported that in developing countries as much as 90 per cent of waste water is discharged without treatment. The report states that the impairment of water quality near major urban centres is recognized as a major problem, and that in parts of the world, water quality has been so degraded that it is unfit even for industrial purposes (see E/CN.17/1999/9).

54. Cholera, which is spread by contaminated water and food, struck West Africa in 1970, and since then has become endemic in most of the continent. The disease struck Latin America in 1991 and has since spread throughout other regions. The prevalence of dengue fever has grown dramatically in recent years, and has become endemic in more than 100 countries of Africa, the Americas, the Eastern Mediterranean, South East Asia and the Western Pacific. It is estimated that some 2.5 billion people are currently at risk of infection. Malaria is a public health problem and has become endemic in 101 countries and territories, affecting some 2.4 billion people: worldwide prevalence of the disease is estimated to be in the order of 300 to 500 million clinical cases each year. Mortality due to malaria is estimated to be over 1 million deaths each year. The vast majority of deaths occur among young children in Africa, especially in remote rural areas with poor access to health services.

F. Poverty, water supply and sanitation

55. The provision of safe water and adequate sanitation is closely related to the problem of poverty. The World Bank estimates that nearly 1.3 billion people live on the equivalent of $1.5 a day at 1997 prices. Nearly three billion people subsist on $3 per day.[11] In 1999, the United Nations Development Programme (UNDP) *Human Development Report* concluded that in 92 developing countries, human poverty ranges from a low of 2.6 per cent of the population to a high of 65 per cent.[12] Poverty levels exceed 33 per cent of the population in 37 of 92 developing countries and 50 per cent in another 11 countries, all but one located in Africa.

III. Policy trends since the inception of the decade

56. The Mar del Plata Action Plan laid out a basic framework for the implementation of the International Drinking Water Supply and Sanitation Decade. The provisions set out in the Action Plan relied heavily on national Governments to develop, implement programmes and generate the necessary financial resources. They were formulated in an atmosphere of economic optimism which dissipated in the ensuing years as a result of economic stagnation. It became increasingly clear that Governments alone could not achieve the objectives of the Decade. While the role of Governments remained as essential as ever, the nature of its intervention has undergone a considerable

evolution. At the same time, other agents of progress have emerged as being critically important in the development paradigm. The evolution that has taken place is both conceptually and operationally evident in the recommendations contained in the outcome of the Global Consultation on Safe Water and Sanitation for the 1990s, held at New Delhi in 1990; the outcome of the International Conference on Water and the Environment, held at Dublin in 1992; chapter 18 of Agenda 21; the outcome of the Ministerial Conference on Drinking Water and Environmental Sanitation, held at Noordwijk, the Netherlands, in 1994; and the outcome of the expert group meeting on strategic approaches to freshwater management, held at Harare in January 1998. The main elements of this evolution are discussed below.

A. Decentralization of governmental functions and role of the private sector

57. From the outset of the Decade, it became evident that national Governments alone, even with the assistance of international organizations, were unable to provide the necessary expansion of services to a growing population. The role of Governments has, to some extent, tended to shift from the provision of services to the provision of a legislative and regulatory framework aimed at facilitating the provision of services in a stable environment and on an efficient and equitable basis. As stated by the International Conference on Water and the Environment and in chapter 18 of Agenda 21, there has been an increasing recognition of the need to delegate the management of water resources to the lowest appropriate level. As a result, there has been a trend towards a greater autonomy of public utilities, with greater managerial and operational transparency and greater public accountability. Such changes in Governments have also facilitated interventions of the private sector in the generation of financial resources, the provision of services and management ventures.

58. The private sector is becoming an increasingly important actor as part of the management schemes of existing utilities. The potential for increased private intervention in the near future is considerable with regard to the provision of services to more affluent urban areas of developing countries. However, its participation in the extension of service to the poor in urban and rural areas remains more problematical, hinging on pricing and cross-subsidy policies that would enable private utilities to generate a fair return on their investments. Consequently, of the $25 billion invested by the private sector in developing countries, to date Southern Asia has not been the recipient of any private investment and less than $250 million has gone to the African continent.[7]

59. While the nature of governmental intervention is changing from that of a provider of services to the provision of an enabling environment, its importance has not diminished. For autonomous public and private utilities to succeed in the provision of services required by individuals, the existence of a stable regulatory environment is required. There is now a growing understanding as well as an increasing number of policy measures taken by Governments aimed at providing the regulatory framework needed to ensure that utilities provide services in an equitable and efficient manner.

B. Empowerment of local communities

60. Together with the shift in the role of Governments, there has been an increasing recognition of the importance of empowering local communities to act as agents of change. Community organizations in peri-urban and rural areas have been successful in generating the financial resources needed for the extension of services and in acting as providers of services through the operation and management of local utilities. Many schemes have been developed in several developing countries by which peri-urban communities are organized to receive water from urban networks and be put in charge of the local distribution system and method of collecting fees for the water thus distributed. In addition, non-governmental organizations have often provided critical assistance to local community organizations in terms of technical and financial support, in the design and operation and in the provision of small loans for the implementation of programmes.

C. Importance of the gender dimension

61. There has been an increasing recognition of the need to empower women in the process of solving the water supply and sanitation tragedy. Studies in Southern Asia have shown that community water supply and sanitation programmes supported by

UNICEF and involving women have resulted in higher coverage and better maintenance of water and sanitation facilities, better hygiene awareness and lower incidence of water- and sanitation-related diseases. Attention to the specific needs of women with regard to their daily tasks can have significant health and economic impacts, as illustrated by programme adjustments in some Southern Asia and Caribbean countries. The neglect of the sanitation needs of young female students has resulted in a number of cases in their dropping out from school. The exclusion of women from education opportunities and from managerial and administrative functions has often resulted in the installation of facilities that do not suit their requirements or take advantage of their potential as managers and operators.

D. Capacity-building and improvement of operation and maintenance

62. While the need for additional financial resources has always been recognized, increased emphasis is being given to the strengthening of institutions and legislative frameworks in order to create the necessary enabling environment. There has been an increasing awareness of the need to strengthen technical and managerial capacity at all levels of government as well as managers and operators at the local community level. Efforts have been made in order to improve education and training of technical and administrative staff and of the local entrepreneurs in order to enhance their effective participation. Increased recognition is being given to the need for the transfer of appropriate technologies and the use of indigenous technologies.

63. The experience gained in the early stages of the International Drinking Water Supply and Sanitation Decade highlighted the importance of having in place adequate operation and maintenance procedures and the staff to carry out the required tasks. The lack of attention to operation and maintenance in rural areas has often resulted in a situation in which wells become inoperative a few years after they have been put into operation. In many cases, wells were becoming inoperative faster than new ones could be brought on line. In urban areas, inadequate operation and maintenance has been at the root of the unreliability of services and high levels of unaccounted for water losses in the systems.

64. There is now a better understanding of the need for well-trained personnel responsible for operation and maintenance and for the establishment of suitable institutional arrangements, including the involvement of local communities. There is also a growing awareness of the importance of utilizing appropriate technologies the operation and maintenance of which lend themselves to being managed at the proper lowest level.

E. Drive towards an integrated approach to water resources management

65. The 1997 comprehensive assessment of the freshwater resources of the world, as well as similar other assessments, broadly estimate that approximately one third of the world's population live in areas already facing moderate or severe stresses over their water resources due to high consumption levels relative to availability. The comprehensive assessment concludes that unless effective management measures are taken, as much as two thirds of the world's population could be facing these levels of stress by 2025. In the face of increasing competition among various uses, the 1992 International Conference on Water and the Environment (see A/CONF.151/PC/112), as well as chapter 18 of Agenda 21, stressed the need for a holistic management of freshwater as a finite and vulnerable resource, and the integration of sectoral plans and programmes within the framework of national economic and social policy.[13] The 1994 Ministerial Conference on Drinking Water and Environmental Sanitation reiterated the need for an integrated approach. It recommended that Governments undertake a water resources assessment in order to produce an inventory of the current situation and to identify problems and constraints in providing water supply and environmental sanitation services. The Conference also called on Governments to develop, review or revise, in the context of a national sustainable development strategy consistent with Agenda 21, measures for water resources management, including drinking water and environmental sanitation, and to develop, review or revise by 1997 and implement measures aimed at achieving a rational and effective provision and use of drinking water and environmental sanitation. So far, however, as stated in previous reports of the Secretary-General to the Commission on Sustainable Development, progress in

the implementation of chapter 18 of Agenda 21 and of the Water Conferences have been inadequate.

F. Economic and financial dimension of water supply and sanitation

66. Chapter 18 of Agenda 21 states that priority has to be given to the satisfaction of basic needs and the safeguarding of ecosystems. Beyond these requirements, however, water users should be charged appropriately.[14]

67. Experience since the launching of the International Drinking Water Supply and Sanitation Decade has amply demonstrated that the autonomy and viability of utilities, whether public or private, as well as of community organizations hinge on their ability to recover costs via appropriate cost recovery policies. While equity considerations require that concerns over the satisfaction of basic human needs be fully taken into account, the burden of subsidies, when and where needed, cannot rest on the providers of services if their sustainability is to be maintained. To a great extent, cost recovery policies for services delivered to poor urban and rural communities are linked to the establishment and support of organizational structures capable of providing the type of services that the members of the community are willing and able to pay for.

68. Income transfers in the form of subsidies to the poor may be required at times. In other cases, however, the lack of suitable cost recovery policies, coupled with the use of inappropriate technologies, may result in poor consumers in peri-urban and rural areas having to pay needlessly high prices. Members of poor communities are sometimes able and willing to pay for services suitable to their requirements, but if left to their own devices they are likely to pay considerably more for inferior services from local vendors. The available evidence suggests that frequently, the price paid by people in peri-urban areas for water supplied by tankers is 20 to 30 times higher than prices paid by consumers served by house connections.

IV. Outlook for the year 2025

69. The available data clearly suggests that with perhaps a few exceptions, a continuation of the current level of efforts in the provision of services will not yield full service water supply and sanitation coverage in most developing countries in the near future; efforts required to achieve this objective will need to be of a much greater magnitude. Difficulties in achieving full or near full coverage will be compounded by increasing competition for scarce water resources among various industrial, domestic and agricultural uses and by an inevitable rise in the cost of providing water and sanitation services.

A. Daunting urban challenge

70. Urban growth in developing countries will strain their ability to maintain existing infrastructure, let alone their ability to extend services to the growing population. By the year 2025, it is estimated that about 54 per cent of the population in developing countries will reside in urban areas. By the year 2015, 21 cities in developing countries — 15 in Asia, 2 in Africa and 4 in Latin America from a total of 26 worldwide — will have a population of 10 million or more, as compared to 1 city in 1970 and 10 cities in 1995. Another 31 cities will have a population between 5 and 10 million by 2015, as compared to 17 in 1995 and 10 in 1970. In 1970, 71 cities in developing countries had a population between 1 and 5 million people; the number of cities in this category rose to 187 in 1995 and is expected to reach 228 by 2015.[15] Globally, in order to achieve full water supply coverage by 2025 in urban areas services would need to be provided to the additional 1.7 billion people expected to dwell in urban areas as well as to the 184 million currently lacking access to water supply services. In the case of urban sanitation, the 2.16 billion people to be provided with services would be equivalent to 76 per cent of the current urban population.

71. As shown in figure 1, urban annual growth rates between 2000 and 2025 are expected to exceed 4 per cent in the least developed countries and in Eastern and Middle Africa. They are expected to exceed 3 per cent in Western Africa, Melanesia and Micronesia. Lower but still significantly high rates are expected to persist in South-Central and South-Eastern Asia as well as Central America. Urban population is expected to at least double in 39 African countries, 13 of which are located in Eastern Africa, 7 in Middle Africa, 1 in Northern Africa, 3 in Southern Africa and 15 in Western Africa. For Asia, eight countries in South-Central Asia are expected to witness a doubling or

more of their urban population. The same is expected to be the case for four countries in South-Eastern Asia and five countries in Western Asia. Eleven countries in Latin America and the Caribbean and 87 countries worldwide are expected to at least double their urban population in the next 25 years. Clearly, many developing countries and the regions with the highest urban growth will face a difficult situation requiring major efforts by all concerned.

72. The sustainability of urban development is very much in question not only as a result of increased requirements for water supply and sanitation but also and perhaps more significantly by the enormous additional stress on waste water and solid waste treatment facilities, which are already vastly inadequate to cope with existing loads. The continued neglect of the urban waste problem will inevitably have dire consequence with regional and global implications in the not too distant future. To date, the call for urgent action voiced in previous reports of the Secretary-General and major United Nations conferences has remained unheeded.

B. Consequences of neglecting the rural poor

73. In spite of lower rates of population growth in rural areas, the outlook for the provision of water and sanitation to the rural poor remains bleak. Globally, access to water supply would have to be provided to the additional 77 million people stemming from population increase and to the 947 million currently lacking access to rural water supply services. In the case of rural sanitation, the 2.1 billion people that would require services would be equivalent to over 82 per cent of the number of rural dwellers with access to sanitation.

74. The progress achieved in Asia and to a lesser extent the current situation in Latin America and the Caribbean gives reason to hope that significant achievements, if not full coverage, may be achieved within the next 25 years in some countries in these regions. With the exception of Northern Africa, however, the situation in Africa gives little cause for optimism unless it becomes the subject of major efforts by local and national authorities, regional and international organizations and non-governmental organizations.

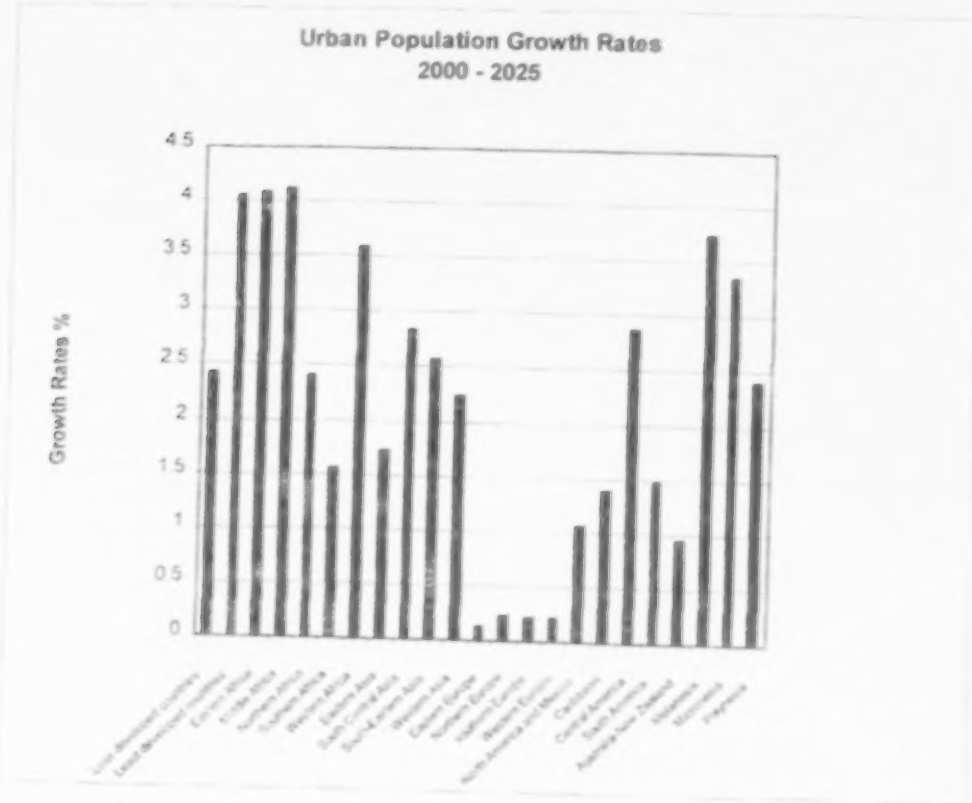
V. Path to full coverage

75. The task of providing basic water and sanitation services to the growing masses of the urban poor is nothing short of daunting. The provision of services to the neglected rural population still remains a formidable challenge which needs to be addressed with the utmost urgency. Any hope of achieving full coverage in the next 25 years can only be envisaged if Governments, the international community, non-governmental organizations and civil society at large fully commit themselves to undertakings of a much larger magnitude than heretofore.

76. Governments are urged to fulfil their commitments expressed in the Copenhagen Declaration on Social Development towards promoting and attaining the highest attainable standards of physical and mental health and access to primary health care, including the developing and updating of country action plans or programmes to ensure universal, non-discriminatory access to basic health services, including sanitation and drinking water.[16] With the support of the international community, they are urged to commit themselves to the adoption and implementation of programmes designed to bring to an end the human misery endured by the millions who are still denied suitable basic water and sanitation services.

77. The sustainability of development in many developing countries is at grave risk as a result of the inadequate control of liquid and solid wastes polluting the environment. There is an urgent need to address the ever-growing problem of solid and liquid waste if an irreversible degradation of the environment and major outbreaks of water-related diseases are to be prevented and if major ecological and health disasters are to be avoided. Increased attention must be given to the management of water resources with a view to preventing the outbreak of vector-borne diseases, which are becoming endemic in many developing countries.

Figure 1.
Urban population growth rates by region, 2000-2025



Source: World Population Prospects: the 1998 Revision (United Nations publication, Sales No. E.99.XIII.8).

78. Action is needed on several fronts, requiring the implementation of recommendations stemming from the United Nations Conference on Environment and Development (UNCED) and subsequent conferences. First of all, Governments, with the support of the international community, as appropriate, need to assess or update their knowledge of their current situation concerning water supply and environmental sanitation in the context of an integrated, holistic approach to water resources development, management and use, and to establish specific targets and programmes, with special emphasis on the needs of the poor.

79. In 1994, the Ministerial Conference on Drinking Water and Environmental Sanitation recommended that Governments undertake a water resources assessment in order to produce an inventory of the current situation and to identify problems and constraints in providing water supply and environmental sanitation services. The Conference also called on Governments to develop, review or revise, in the context of a national sustainable development strategy consistent with Agenda 21, measures for water resources management, including drinking water and environmental sanitation, and to develop, review or revise by 1997 and implement measures for achieving a rational and effective provision and use of drinking water and environmental sanitation.

80. The organizations of the United Nations system active in the sector, both individually and collectively through the ACC Subcommittee on Water Resources, are urged to commit themselves to intensifying their support to developing countries and monitoring

activities, through their regular programme activities and through their technical cooperation and financial support activities. Other multilateral and bilateral organizations are urged to do the same. In addition, a number of other important issues need to be considered in such national programmes, as defined below.

A. Policy commitment

1. Water supply and sanitation as an integral part of poverty alleviation programmes

81. It is imperative that priority attention be given to the provision of water supply and sanitation within efforts by national Governments and the international community towards poverty alleviation. Programmes and projects aimed at the provision of services to the urban and rural poor must be designed and implemented so as to enhance their health standards and income-earning capability. Water and sanitation projects should also become entry points to economic development.

82. Governments are urged to fulfil the commitment undertaken at the World Summit for Social Development to focus their efforts and policies to address the root causes of poverty and to provide for the basic needs of all, including safe drinking water and sanitation.

2. Water supply and sanitation as an integral part of human settlement programmes, particularly with respect to the provision of suitable sanitation facilities to the urban and rural poor

83. Governments need to integrate policies aimed at increasing the provision of water supply and sanitation facilities to the urban and rural poor with human settlement programmes. This is of particular importance in the case of sanitation in view of the very large and increasing gap between those with access to sanitation services and those without.

B. Sustainability and the implementation of services

1. Improved service delivery, operation and maintenance, reliability of services and water quality

84. Efforts by Governments, private and public utilities are needed to improve the quality of the service provided to consumers by increasing the number of households provided with connections rather than through public taps. Improvements in this area will upgrade the nature of services and at the same time decrease the amount of water losses and facilitate the collection of charges, thus increasing revenues. In addition, major efforts are needed to upgrade the reliability of urban services by upgrading existing installations and improving operation and maintenance procedures. Pressures on ageing infrastructures from the massive influx of people to urban areas will constitute a major challenge in the years to come. Although progress has been made with regard to improving operation and maintenance procedures, particularly in rural areas, by empowering local communities to take charge of the operation and maintenance of facilities, much remains to be done.

85. Major efforts are also needed in urban and rural areas alike in order to ensure that the quality of the water delivered is safe for human consumption. In addition to action needed to increase and improve coverage, Governments, public and private utilities need to take measures to ensure that the water delivered is fit for human consumption.

86. There is an urgent need for a major commitment on the part of Governments to address the problems of liquid and solid waste disposal, as well as those associated with water-borne diseases. Governments are urged to address these issues as part of the setting or updating of targets and programmes.

2. Massive infusion of financial resources coupled with effective cost recovery policies

87. The level of financial resources that will be required to reach sustainable full coverage will be substantially larger than current allocations. The bulk of the required additional investments will inevitably have to come from governmental sources, although increased financial support from international organizations and donors — as well as increased

private investments — will also be required. Governments are urged to heed the call by the World Summit for Social Development for 20 per cent of public expenditures to be allocated by developing countries to basic local services, matched by a 20 per cent allocation of aid budgets from donor countries.

88. The formulation and implementation of cost recovery, policies with due attention to the needs of the poor and specific local socio-economic conditions are essential to achieving the sustainability and autonomy of public or private utilities and full and efficient coverage. Increased financing at the required level is unlikely to be forthcoming without the establishment and implementation of effective cost recovery measures at least sufficient to cover operation and maintenance of installations. Without such measures, the financial viability and autonomy of utilities, whether public, private or run by local community organizations, will tend to be in jeopardy.

3. Decentralization and devolution of responsibilities to the lowest appropriate level of management

89. Governments need to continue and intensify efforts to establish the necessary enabling institutional and regulatory environment required to ensure the effective functioning of autonomous public and private utilities and to promote the effective participation of local communities, the private sector and non-governmental organizations. The role of the Government needs to be clearly defined, distinguishing between its functions in the setting and control of standards and regulations on the one hand, and the provision of services on the other. The establishment by Governments of a well defined regulatory environment aimed at defining priorities and providing for the equitable and efficient provision of services is essential to the successful operation of public or private utilities and for management at the lowest appropriate level.

90. Governments, with the support of the international community, need to increase their efforts with regard to the education and training of administrators and technical personnel, including the training of local operators in rural and peri-urban communities. Increased support to local communities will also be required in order to empower them to become full participants in the financing, establishment, operation and maintenance of local water supply and sanitation facilities. Such support will need to take place through education, technical and financial support. Without the fullest participation of people at all levels of society, the goal of full coverage is unlikely to be attained.

91. Partnerships with the private sector may sometimes need to be encouraged within a suitable regulatory and institutional framework that takes into account the needs of the poor. The achievement of full service coverage in the near future will necessitate the active participation of the private sector. Governments need to develop a suitable legal and institutional environment to facilitate active partnerships with the private sector in a manner that ensures the provision of services to the urban and rural poor.

C. Key strategies for enhancing implementation

1. Integration of water supply and sanitation with hygiene education

92. Governments need to strive towards a close integration of education in general and hygiene education in particular, with efforts to overcome the lack of significant progress in the provision of suitable sanitation services. The importance of the role of women as the major element in the household must be reiterated and emphasized.

93. The cost in human life as a result of inadequate water supplies has been well documented throughout the years. It would be erroneous, however, to assume that improved access to water supply will by itself yield significant improvements in human health without achieving major gains in personal hygiene and access to sanitation facilities. Lack of attention to the promotion of hygiene and the provision of sanitation will continue to impede progress in improving human health. Unless linked to improved educational levels in general and hygiene education in particular, water supply and sanitation programmes are unlikely to have their full intended impact on the improvement of health standards. Conversely, improved education leads to increasing the effective demand for services, particularly sanitation.

2. Gender dimension of water supply and environmental sanitation

94. Governments and the international community are urged to give increased emphasis to the formulation and implementation of policies aiming at empowering women as critical actors in the planning, management and operation of water supply and sanitation ventures. Greater attention needs to be given to the requirements of women and the role they play in the household and the community in order to ensure that the provision of water supply and sanitation services plays its full role in the alleviation of poverty.

95. The full integration of women into the planning and implementation process is also an essential requirement in the empowerment of communities. Although some progress has been made in narrowing the gender gap that prevails in prevailing patterns of socio-economic development and in empowering women as full participants in the programming, management, operation and maintenance of water supply and sanitation services, wide disparities still persist in many countries. For example, the female adult literacy rate for all developing countries as reported in the 1999 *Human Development Report* stands at 62.9 per cent for females compared to 80 per cent for males. Real per capita gross domestic product (GDP) for females in developing countries for 1997 is estimated to be half of per capita GDP for the male population. For most countries, both industrialized and developing countries as well as those with economies in transition, the proportion of female administrators and managers is less than 50 per cent, in many cases much less.[17]

3. Improved information management

96. There is an urgent need to establish or improve monitoring systems capable of assessing with a high level of reliability the situation concerning the availability, spatial and temporal distribution of water resources as well as the situation concerning water supply and environmental sanitation. The lack of adequate water resources data, including water supply and sanitation, remains a weak link in efforts to improve the integrated management of water resources, as called for by chapter 18 of Agenda 21 and conferences held since UNCED. For the most part, data on water supply and sanitation coverage and water quality remains uneven and is often unreliable. Governments need to address this issue if significant progress is to be made in the sustainable development, management and use of the resource with explicitly stated priorities for development. As water quality problems become more serious and widespread, water quality monitoring should become a more important component of national sectoral programmes. National information management programmes can be complemented through community-level surveillance systems where people are empowered with the knowledge and tools necessary to monitor water and sanitation problems as well as the quality of their own water sources.

97. The organizations of the United Nations system, through the ACC Subcommittee on Water Resources and in cooperation with other international and regional organizations as well as relevant non-governmental organizations, should strengthen their support to Governments and their own global monitoring capability. Periodic reporting of water supply and sanitation coverage should be published in the envisaged world water development report.

4. Integration of water supply and sanitation within a holistic approach to water resources development, management and utilization

98. It is essential that the formulation and implementation of time-bound targets for the provision of water supply and sanitation for forthcoming years be carried out within the framework of an integrated approach to water resources management. The Commission on Sustainable Development, at its fifth session, underscored the importance of dealing with water supply and sanitation in the context of an integrated approach to water resources management and utilization. Although some progress has been reported towards achieving that objective, the management of water resources in most countries alike remains highly fragmented.

Notes.

[1] *Report of the United Nations Water Conference, Mar del Plata, 14-25 March 1977* (United Nations publication, Sales No. E.77.II.A.12), chap. I.

[2] See Albert Schwingshandl, Helmut Weidel and Jutta Mayer, "The situation of the water supply and sanitation sector in the Central and East European countries, the new independent States and Mongolia", report prepared for the Water Supply and Sanitation Collaborative Council (Vienna, November 1995).

[3] Countries belonging to the Western Asia region, which were reported separately in previous reports, are currently included in the Asian region.

[4] Disaggregated data for most of the world's subregions, as defined by the United Nations Population Division (see, for example, *World Population Prospects: The 1996 Revision* (United Nations publication, Sales No. E.99.XIII.9)), can also be generated by the UNICEF/WHO assessment but is not included in table 1.

[5] See Arthur G. McIntosh and Cesar E. Yñiguez, eds., *Second Water Utilities Data Book for the Asia and Pacific Region: Summary of Results for 50 Utilities*, (Asian Development Bank, 1997).

[6] See United Nations Development Programme, *Human Development Report 1999* (New York, Oxford University Press, 1999), table 13.

[7] See Water Supply and Sanitation Collaborative Council, "Vision 21: A Shared Vision for Water Supply, Sanitation and Hygiene and a Framework for Action", document presented at the Second World Water Forum and Ministerial Conference (The Hague, 17-22 March 2000), box entitled "Mobilizing external resources".

[8] See Water Supply and Sanitation Collaborative Council, op. cit.

[9] See United Nations Development Programme, op. cit., table 15.

[10] See McIntosh and Yñiguez, op. cit.

[11] See World Bank, *World Development Report 1998/99* (New York, Oxford University Press, 1999), table 4.

[12] The human poverty index used in the *Human Development Report* brings together in one composite index deprivation in four basic dimensions of human life: a long and healthy life, knowledge, economic provision and social inclusion. For developing countries, deprivation in a long and healthy life is measured by the percentage of people not expected to survive to age 40; deprivation in knowledge by illiteracy; and deprivation in economic provisioning by the percentage of people lacking access to health services and safe water and the percentage of children under five who are moderately or severely underweight.

[13] See Report of the *United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex II, para. 18.6.

[14] Ibid, para. 18.7.

[15] United Nations, *World Population Prospects: The 1996 Revision* (United Nations publication, Sales No. E.98.XIII.5).

[16] See *World Summit for Social Development, Copenhagen, 6-12 March 1995* (United Nations publication, Sales No. E.96.IV.8), chap. I, resolution 1, annex I, sect. C, commitment 6 (m).

[17] United Nations Development Programme, op. cit., table 3.